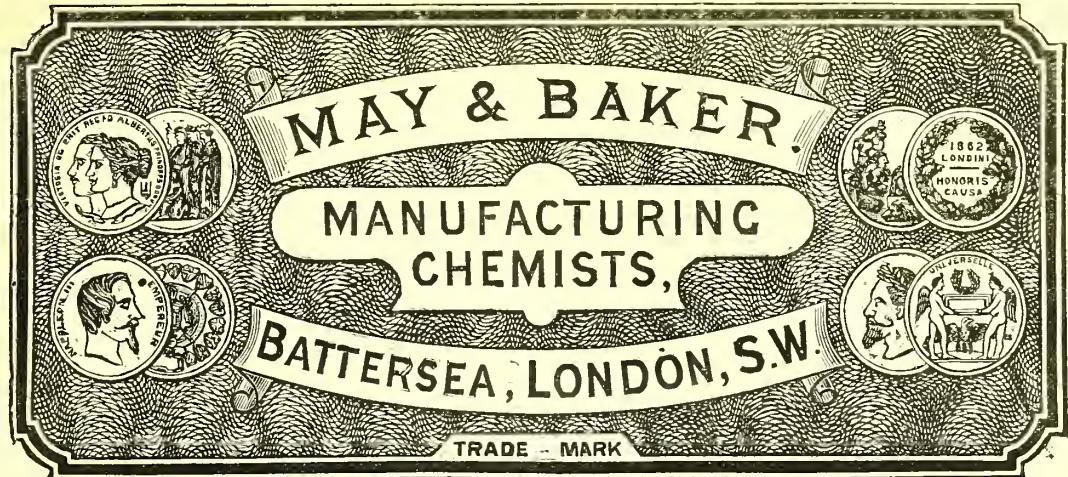




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CUTICURA REMEDIES, now selling rapidly;
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PERFUMES IN SHOW BOTTLES (from 11*s* each).



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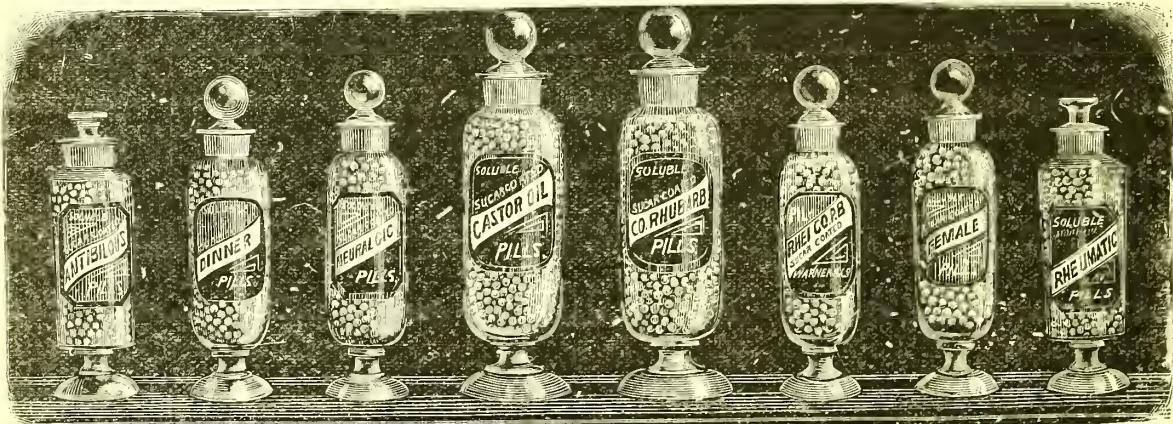
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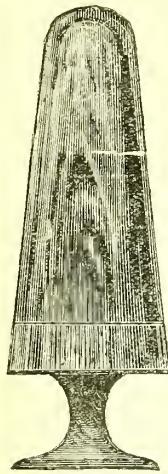
Yours truly,
(Signed) E. GRIFFITH, Chemist.

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 &c.—mailed free on application to members of
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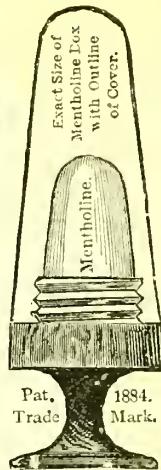
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Medal Awarded
International Inventions
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London, October, 1885.



The Original
Absolutely Pure
Menthol Cone.



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"THE TRUE JAPANESE HEADACHE CURE."

Guaranteed to be only the finest Japanese Menthol, entirely free from oil, Whiter, Firmer, more Crystalline than any other brand, and absolutely pure, making it more valuable for all the purposes for which ordinary Menthol is used. Its hardness and solidity specially fits it for sale and use in hot climates, and also makes it the cheapest Cone to be used in any climate, as it lasts longer than any other Cone. This curious remedy, used in Japan for ages, instantly relieves and removes Nervous Headache, Toothache, Earache, Faceache, Faintness (from over crowded churches, theatres, &c.), Catarrh, or cold in the head, and many other nervous aches and pains; it also certainly relieves Neuralgia, Rheumatism, Sciatica, and other nervous affections; and has a tendency to produce refreshing sleep.

USED BY SIMPLY RUBBING.

Taken internally it relieves Flatulence, Nausea, Colic, and other pains, and is good in cases of Sea-sickness.
No other Remedy in the World so Valuable (costing more than Quinine), so Pure, and so very useful in so many ways, is sold for 1s. per box.

SOME DRUGGISTS HAVE SOLD ONE THOUSAND BOXES.

[1]

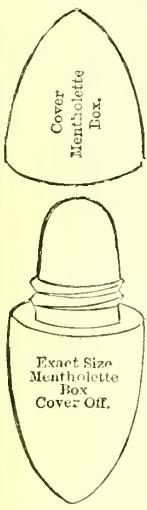
Price per dozen, 6s. 6d., subject to usual Discount.

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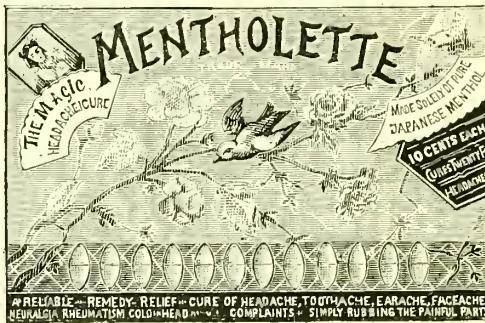
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Mentholette
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ONCE
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USED BY SIMPLY RUBBING.

Taken internally it relieves Flatulence, Nausea, Colic, and other pains; and is good in cases of Sea-sickness. No other Remedy in the World so Valuable (costing more than Quinine), so Pure, and so very useful in so many ways, is sold for 6d. per box.

THE GREATEST NOVELTY OF THE AGE—SELLS AT SIGHT. [2]

Price per dozen, 3s., subject to usual Discount.

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AT
SIGHT.

MANN'S PERFUMES.

The accompanying cut represents a fac-simile of our Pound Bottle, containing 18 fluid ounces, with elongated and etched stopper for trying the odours. We have arranged our Perfumes into ranks according to popularity and demand; those having the most ready sale comprise the first rank, then, next in order, the second rank, then the third rank. This plan gives the Druggist at a glance a more comprehensive idea of our line, and also enables him to make his selection according to the general popularity of the odours. We would always advise a full line of all the perfumes kept in stock, as the second and third ranks contain many odours desired by persons of special tastes, and, while they are not generally of as ready sale as those of the first rank, yet they are always staple. The goods are all made of the same degree of strength, and are intended to be of equal desirability, yet some will take precedence in popular favour over others. We make only the finest quality of Perfumes, which are especially designed to meet the demand of the best drug trade throughout the world.

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IN POINT OF POPULARITY.

Per lb. of
18 fluid ozs.

Lady of the Lake	14/-
White Lilac	14/-
White Rose	14/-
Heliotrope	14/-
Jockey Club	14/-
New Mown Hay	14/-
Lily of the Valley	14/-
Prairie Flower	14/-
Wild Lotus	14/-
Queen of May	14/-
Myrtle Bloom	14/-
Ylang Ylang	14/-
Stephanotis	14/-
Violet	14/-

PERFUMES OF THE SECOND RANK

IN POINT OF POPULARITY.

Per lb. of
18 fluid ozs.

Carnation Pink	14/-
Mignonette	14/-
Ocean Spray	14/-
Tuberose	14/-
Jasmin	14/-
Moss Rose	14/-
Pond Lily	14/-
Frangipanni	14/-
Orange Blossom	14/-
Musk Rose	14/-
Trailing Arbutus	14/-
Honey Suckle	14/-
Sweet Briar	14/-
Sweet Pea	14/-
West End	14/-
White Heliotrope	14/-
Wood Violet	14/-

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Per lb. of
18 fluid ozs.

Musk	28/-
Patchouly	14/-
Rose Geranium	14/-
Tea Rose	14/-
Rondolletia	14/-
Night Blooming Cereus	14/-
Ess. Bouquet	14/-
Millefleurs	14/-

PERFUMES IN SMALL BOTTLES.

GLASS STOPPED.

Per doz.	
½ oz., assorted odours	8/-
¾ " " "	14/-
1¼ " " "	20/-
2½ " " "	34/-
3½ " " "	42/-
4½ " " "	62/-
¾ " " " Tourist	14/-
Small trial size, per gross	23/-
Large " " "	35/-

Our Perfumes combine richness of fragrance with delicacy and permanence of odour. They may be handled and retailed either from bulk or in small packages, both in cold and warm climates, without appreciable deterioration of quality. They take the lead and enjoy the preference in all countries wherever introduced.

Hoping to receive your orders, we are,

Yours very respectfully,

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"CRYSTAL WHITE" DOUBLE REFINED ESSENTIAL OIL OF TRUE PEPPERMINT.
ORIGINAL AND ONLY MANUFACTURER OF
PIPMENTHOL CRYSTALS.

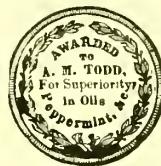
THE "CRYSTAL WHITE" ESSENTIAL OIL and SOLID CRYSTALS OF PEPPERMINT are produced from SELECT CULTIVATED PLANTS OF GENUINE MENTHA PIPERITA, under improved and special processes (discovered by the manufacturer), by which they combine EXCEEDING STRENGTH with the most PERFECT FRAGRANCE and ABSOLUTE PURITY. In recognition of their quality they have received the highest commendation from the most EMINENT SCIENTISTS, the LEADING CONSUMERS, and at the GREAT EXHIBITIONS. Prepaid Samples and quotations for free delivery in any city in America, Europe, or the Colonies, will be sent on application.



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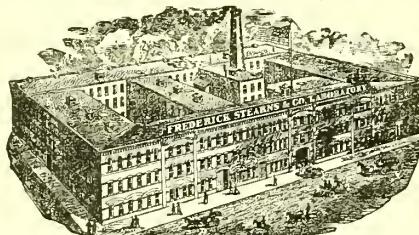


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EXTRACTS, SUGAR, GELATINE and COM-
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FORMULA:—Its analysis shows that each fluid drachm contains 5 1-2 grains free Phosphoric Acid (P_2O_5), and nearly 4 grains Phosphate of Lime, Magnesia, Iron, and Potash.

Horsford's Acid Phosphate has been in use by the medical fraternity of the United States and elsewhere for several years, with the most satisfactory results, in

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It is a colourless liquid, acid to the taste, and contains no pyro-phosphate or meta-phosphate of any base whatever.

Among the numerous forms of phosphorus in combination, Horsford's Acid Phosphate seems best adapted for use as a medicinal remedy.

Especially serviceable as a menstruum for the administration of such alkaloids as strychnia, morphia, quinia, and other organic bases which are usually exhibited in acid combination.

It makes a refreshing and nutritious drink in fevers, and with water and sugar a delicious beverage.

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They are not made from the crude material, but by dissolving the active principles in Alcohol in definite proportions, and invariably represent a uniform amount of therapeutic power.

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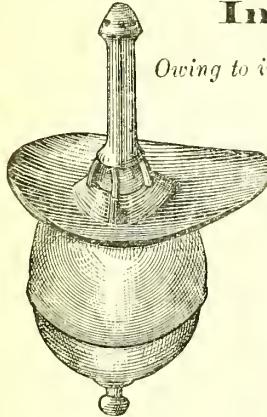
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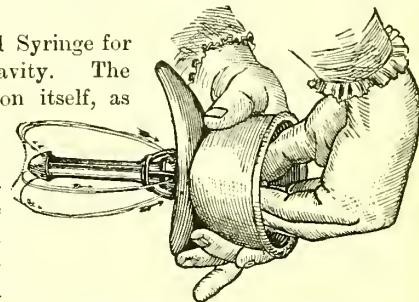
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Owing to increased demand we have been able to cheapen the cost of production of these Syringes and have pleasure in giving our customers the benefit thereof.

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can therefore be kept in circulation and in contact with the parts by repeating the pumping motion of the bulb. It will also be noticed that the fluid escapes as a spray from the large holes at the point of the stem and returns through the holes at the root of same, which is provided with hard rubber screen-bars, preventing the folds from interfering with the rapid return of the fluid into the bulb. In filling the bulb, a couple of turns will unscrew it.

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8. For Predigestion of Milk; to each pint of warm milk use a few grains of the Pepsin previously dissolved in a little lemon-juice; decidedly superior to and more economical than Pancreatine.

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IN TRANSPARENT GLASSY SCALES.

This Peptone is not a partially-digested product, but representing the Beef completely digested by the Pepsin mentioned above, containing all the elements of the beef except fat. One ounce equal to eight ounces tender beef. Retail, 2s. 6d. per ounce.

The above preparations are only manufactured and put up exclusively as specialities by

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	containing 25 PILLS	containing 100 PILLS	containing 25 PILLS	containing 100 PILLS	
*Aconitine Crystals (Duquesne's)	1-500 gr.	7 0	24 0	Hydrastine (White Alkaloid)	1-2 gr.
* Aloë Barb. B.P. "	1-200 gr.	7 0	24 0	Iodoform	1 gr.
Alocs Barb. B.P. .... .5 gr.	5 0	16 0	" and Iron	11 0	
" Dilute (Hall's Dinner)	5 0	16 0	*Ipecac. Powdered	1-4 gr.	
" Socotrine, B.P. .... .5 gr.	5 0	16 0	" Comp. (Ipecac and Opium) .....	.5 gr.
" and Asafoetida, B.P. .... .5 gr.	5 0	16 0	" and Squill, B.P. .... .5 gr.	9 0	
" and Iron, B.P. .... .5 gr.	5 0	16 0	" and Hydrogen (Quaqueune's)	5 0	
" and Myrrh, B.P. .... .5 gr.	5 6	18 0	" Iodide (Blancard's Formula)	1 gr.	
" Nux Vomica	6 0	20 0	" and Quinine Citrate	2 gr.	
* Aloin	1-10 gr.	5 0	16 0	*Quinine, and Strychnine	13 6
* "	1-4 gr.	6 0	20 0	Laxative Vegetable (Improved Cath.)	5 6
* "	1-2 gr.	7 0	24 0	*Manganese, Bin-oxide	2 gr.
" Compound	1 gr.	11 0	" by Hydrogen (Quaqueune's)	1 gr.	
* " and Strychnine	7 0	24 0	" Iodide (Blancard's Formula)	1 gr.	
* " Strychnine and Belladonna	7 0	24 0	" and Quinine Citrate	2 gr.	
Anti-Cholera .....	.2 gr.	7 0	" Quinine, and Strychnine	13 6
*Anti-Dyspepsia (Fothergill's)	7 0	24 0	Laxative Vegetable (Improved Cath.)	49 6	
*Aphrodisiac	16 0	59 6	*Mercury, Bin-Iodide	1-16 gr.	
Arsenious Acid	1-50 gr.	5 0	" Proto Iodide	1-8 gr.	
"	1-20 gr.	5 0	"	1-4 gr.	
*Asafoetida, U.S.	5 0	16 0	Morphine, Muriate	1-8 gr.	
Compound, B.P.	5 gr.	16 0	"	1-4 gr.	
*Atropine	1-300 gr.	7 0	*Narcotic Extracts (Brown-Sequard)	15 0	
* "	1-100 gr.	7 0	Nitro-Glycine	55 6	
Blue Mass, B.P.	1 gr.	5 0	"	1-100 gr.	
" " .....	.2 gr.	5 0	"	7 0
" " .....	.3 gr.	5 0	"	24 0
" " Colocynth and Hyoscy. ....	.5 gr.	5 6	Opium, Powdered	1-50 gr.
Calcium Sulphide	1-10 gr.	6 0	"	7 0	
" "	1-4 gr.	6 0	" and Acetate of Lead, B.P.	24 0	
* Calomel, Colocynth, and Hyoscyamus	1-2 gr.	6 0	" and Camphor	7 0	
Comp. B.P.	1 gr.	6 0	Pepsin, Pure Concentrated	24 0	
" and Opium .....	.5 gr.	6 0	Phosphorus	32 0
*Camphor and Hyoscyamus	5 gr.	9 0	"	1-100 gr.	
" Mono-Bromated .....	.2 gr.	7 6	"	6 0
*Cannabis Indica Extract	1-4 gr.	7 0	"	20 0	
*Cascara Sagrada Extract	1-2 gr.	9 0	"	6 0	
Cathartic Compound U.S.P. ....	.3 gr.	7 0	"	20 0
*Codeine	5 6	18 0	" and Iron	8 0	
Colocynth Comp. B.P.	1-2 gr.	11 0	Iron and Quinine	17 0	
" "	4 gr.	20 6	" and Nux Vomica	63 6	
" " .....	.5 gr.	9 0	" and Nux Vomica and Iron	7 0
" " and Blue Mass .....	.5 gr.	9 0	" and Quinine	8 0
" " and Calomel .....	.5 gr.	9 0	" and Quinine, Iron, and Strychnine	17 0
" " and Hyoscy. B.P. ....	.5 gr.	9 0	" and Valer. Zinc.	17 0
" Extract, B.P. ....	.5 gr.	9 0	Picrotoxin	63 6
Conium Compound, B.P. ....	.5 gr.	5 0	"	7 0
*Copreira Compound .....	.5 gr.	11 0	*Podophyllin	24 0
" and Oleo-Resin Cubeb .....	.5 gr.	39 6	"	1-8 gr.
Corrosive Sublimate	1-30 gr.	5 0	"	5 0	
* " "	1-20 gr.	5 0	"	16 0	
* " "	1-10 gr.	5 0	"	1-4 gr.	
Crot'n Chloral .....	.1 gr.	10 0	"	1-2 gr.
" " .....	.2 gr.	17 0	Quinine, Bi-Sulphate	1-80 gr.
*Cubeb, Oleo Resin, with Soda .....	.7 gr.	7 0	"	1-8 gr.
Digitalin	1-60 gr.	7 0	"	1-4 gr.	
*Elaterine	1-20 gr.	13 0	"	1-2 gr.	
Emmenagogue (Mutter's) .....	.5 gr.	5 6	"	1 gr.
Ergotin .....	.3 gr.	16 6	"	1 gr.
Euonymin .....	.2 gr.	16 0	"	2 gr.
" Compound .....	.3 gr.	20 6	"	3 gr.
Ferruginous (Blaud's) ....	.5 gr.	16 0	"	4 gr.
" " .....	.5 gr.	6 0	"	5 gr.
" " .....	.5 gr.	20 0	"	5 gr.
" " .....	.5 gr.	7 0	"	5 gr.
" " .....	.5 gr.	24 0	"	5 gr.
The reputation of Gelatine-coated Pills has been created by our manufacture. In ordering, be careful to specify "MCK. & R. PILLS."					
REVISED LIST OF FORMULAS MAILED FREE ON APPLICATION.					
PRIVATE FORMULAS.—Private Formulas of 3,000 or more Pills made and Capsuled to order for Hospitals and large consumers at special quotations.					
Address: MCKESSON & ROBBINS , 91 Fulton Street, New York.					

The reputation of Gelatine-coated Pills has been created by our manufacture. In ordering, be careful to specify "MCK. & R. PILLS."

REVISED LIST OF FORMULAS MAILED FREE ON APPLICATION.

PRIVATE FORMULAS.—Private Formulas of 3,000 or more Pills made and Capsuled to order for Hospitals and large consumers at special quotations.

J. W. DRYSDALE & CO.,

4 BURY STREET, ST. MARY AXE, LONDON, E.C.

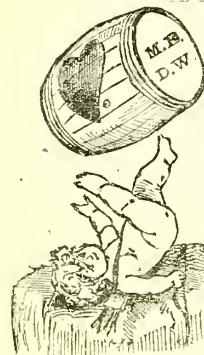
Cab'e Address—"FLORENTINE LONDON."

AGENTS FOR AMERICAN & CONTINENTAL MANUFACTURERS.

AGENCIES AND CORRESPONDENCE SOLICITED.

The Mormon Elder's DAMIANA WAFERS.

The most Powerful
INVIGORANT
Ever Produced.



Permanently Restores those
Weakened by Early Indiscretions.
Imparts Youthful Vigor. Re-
stores Vitality. Strengthens and
Invigorates the BRAIN & NERVES.
A Positive cure for IMPOTENCY
& Nervous Debility. Prompt, Safe
and Sure. 4s per box, 6 for 20s.
mailed to any address in the World
on receipt of price. Send for Circular.

ADDRESS
F. B. CROUCH,
202 Grand St., New York.

S. Radlauer (Rothe Apotheke) Posen (Germany).

Awarded Gold Medals at Paris, Naples, and Brussels.

The following Preparations are highly recommended:—

NAPHTHALIN MOTH PAPER, 100 sheets, 10x12 in., 5/- or 20 books at 10 sheets each, smaller size, 5/-.

RADLAUER'S CORN-COLLOIDUM, with bottle and brush, 7*fl. oz.*, less 33*per cent.*

RADLAUER'S ESSENCE OF PINES, per bottle, 1*fl. oz.*, less 33*per cent.*

PATENT SPRAY PRODUCER, 1*fl. oz.*; TAMARIND CONFECTION, similar to the French, but more effectual, 100 cakes, 4*fl. oz.*, box 5*fl. oz.* extra.

PEPSIVE COLD CONFECTION per box, 1*fl. oz.*, less 33*per cent.*

FERALBUMIN CHOCOLATE, box of 20 cones, 1*fl. oz.*, less 25*per cent.*

NEW TAPE-WORM REMEDY, consisting of Extract of Fern, Kousso, and Castor Oil, per box, 3*fl. oz.*, less 50*per cent.* in elastic capsules.

PURE MENTHOL CONES in wood cases, 5*lb.* per dozen; MUSTARD CONES, 4*lb.* per dozen; FRESH SQUILLS, 4*lb.* per 11*lb.*; PASTA GUMMOSE, 2*lb.* per lb.; SALAMMONIAC TABLETS, black, 2*lb.* per lb., silver-coated, 3*lb.* per lb.; PRIME CAUCHOUS, 1*lb.* per lb.; BERGMANN'S TAR-SULPHUR SOAP, BIRCH-BALM SOAP, SOAP OF LILY-JUICE, 3*lb.* per dozen; RADLAUER'S ICHTHYOL SOAP, large cakes, 8*lb.* per dozen, small cakes, 5*lb.* per dozen, guaranteed to contain 10*per cent.* Ichthyol; SALICYL-VASELINE COLD CREAM, in fancy boxes, 1*lb.*, less 33*per cent.*; INSECT POWDER, made from genuine Dahurian flowers, very effectual, in fancy boxes, 1*lb.*, 2*lb.*, and 7*lb.*, less 30*per cent.*

ONE MONTH DRAFT.



GOVERNMENT DISINFECTANT



CARBOLIC POWDER (PINK) in 1 Cwt. 2 Cwt. CASKS 1lb & ½ Packages

CARBOLIC POWDER (PINK) in TINS 6*lb.* & 1*lb.*

CARBOLIC FLUID in 6*lb.* & 1*lb.* STOPPED BOTTLES

CARBOLIC SOAP N° 1 & N° 2

CARBOLIC & GLYCERINE SOAP in ¼ lb. JABS

FREE FROM POISON
AGREEABLE IN SMELL

THE GOVERNMENT SANITARY C°, TO BE HAD FROM ALL
LONDON E. WHOLESALE DRUGGISTS.

GEORGE TREBLE & SON,
CHEMISTS' SHOP FITTERS AND SHOW-CASE MAKERS.

PLANS AND ESTIMATES SUBMITTED.

FACTORY: 27 CANAL ROAD WHITMORE RD., HOXTON, LONDON, N.

BEENSTEIN & VOGT,
Sole Wholesale Agents, **DR. HEINRICH BYK, BERLIN.**

SPECIALITIES—
ACIDS: Benzoic, Gallic
PYROGALLIC, Tannic.
Iodine, Iodoform, Iodides of Alkalies.

Bromine, Bromides of Alkalies. Chloralhydrate,
Silver Nitrate, Salts of Gold, Oxalate
of Potash, Proxylin.

Correspondence with the
Colours invited.

28 JEWRY Street, LONDON, E.C.

SPECIALITIES

Abiet.s.	Cloves,	SPECIALITIES
Almonds.	Cardamom.	Ciraway Seed.
Absynth.	Cedar Wood.	Coriander.
Aniseed.	Estab. 1823.	Iridis.
Angelica.	DISTILLER OF ALL	Amber.

ESSENTIAL OILS.

Mace. Calamus. Celery.

Juniper Berries. Linaloe.

Fennel Seed. Patchouly.

Mustard. Nutmegs. Pine Sylvestris.

Sandal Wood.

Cognac Artific.

FOR SAMPLES AND QUOTATIONS APPLY TO
BERNSTEIN & VOGT, Celery.
SOLE WHOLESALE AGENTS, Linaloe.
28 Jewry St., Patchouly.
LONDON, Pine Sylvestris.
E.C. Sandal Wood.
Mustard. Nutmegs. Cognac Artific.

TO CHEMISTS AND DRUGGISTS, HOME AND FOREIGN.

PRICE LISTS and TRADE TERMS for the following PROPRIETARY ARTICLES can be had on application, enclosing Business Card, to JOHN M. RICHARDS, Depot for American Medicines, 46 Holborn Viaduct (late Great Russell Street), London, E.C.



Show Cards and Printed Matter will be supplied on request.

NOTE NEW ADDRESS:

46 HOLBORN VIADUCT, LONDON, E.C.

SPONGES.

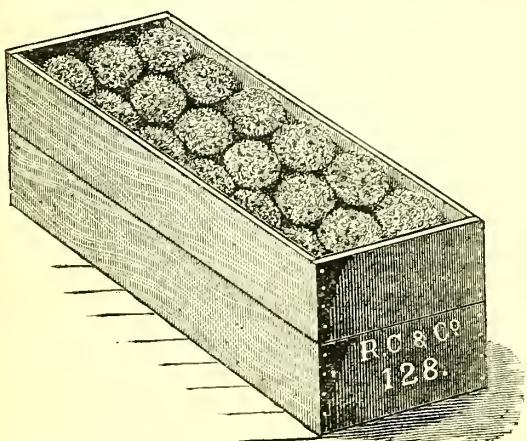


**R. CRESSWELL & CO.,
SPONGE IMPORTERS AND MERCHANTS,
32 RED LION SQUARE, LONDON, W.C.;
And at PIRÆUS and SMYRNA.**

Telegraphic Address, "Cresswell London."

Established 1850.

Sponges adapted specially for Druggists, Perfumers, Saddlers, Brush-makers, &c., will be found fully described in the following Price List—by the Case, Piece or Weight, Sandless or in Sand; on Strings, Cards, and in Blue Card Boxes.



Sponges in Cases.

SANDED OR SANDLESS.

HONEY-COMB SPONGES.

No.	Q'ty.		Pieces in case, about	Price case.
1	1st	Finest selected shapes, assorted sizes	120	240/-
2	1st	Do. do. do.	75	140/-
3	1st	Do. do. do.	45	80/-
4	1st	Small selected shapes	280	140/-
5	1st	Superior do. large Bath sizes	25	140/-
6	2nd	Do. quality shapes, assorted sizes	125	160/-
7	2nd	Do. do. do.	73	84/-
8	2nd	Good quality shapes, small	280	70/-
9	2nd	Do. large Bath sizes	25	100/-
10	3rd	Do. assorted sizes	145	105/-
11	3rd	Do. do.	85	70/-
12	3rd	Do. large Bath sizes	25	60/-
13	4th	For Stable use, &c.	100	50/-

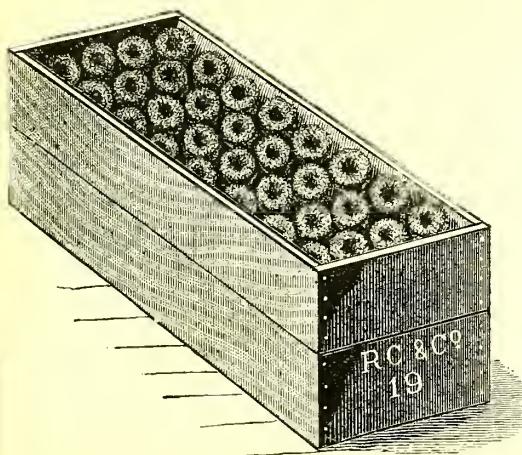
See following pages, 13, 14, and 15.

R. CRESSWELL & Co.,

Sponges in Cases.

SANDED OR SANDLESS.

FINE TURKEY SPONGES.



No.	Qlty.		Pieces in case about	Price case.
14	1st	Finest selected Cups, assorted sizes	... 110	360/-
15	1st	Do. do.	... 60	200/-
16	1st	Do. Bath sizes	... 25	240/-
17	2nd	Superior Cups, assorted sizes	... 110	240/-
18	2nd	Do. do.	... 60	140/-
19	2nd	Do. Bath sizes	... 35	180/-
20	3rd	Fine Cups, assorted sizes	... 110	180/-
21	3rd	Do. do.	... 65	105/-
22	3rd	Do. Bath sizes	... 35	140/-
23	1st	Turkey Solids, assorted sizes	... 100	140/-
24	2nd	Do. do.	... 100	110/-
25	1st	Flat Saddle, assorted sizes	... 50	190/-
26	1st	Do. do.	... 30	120/-
27	2nd	Do. do.	... 50	130/-
28	2nd	Do. do.	... 30	80/-

BROWN TURKEY SPONGES.

No.	Qlty.		Pieces in case.	Price case.
29	1st	Finest selected, assorted sizes	... 130	90/-
30	1st	Do. do.	... 70	55/-
31	2nd	Superior quality	... 130	63/-
32	2nd	Do. do.	... 70	40/-
33	3rd	Slate quality	... 300	25/-

FINE EGYPTIAN SPONGES.

A very good-looking and cheap kind of Fine Toilet Sponge; very durable, and soft when wetted.

No.	Qlty.		Pieces in case.	Price case.
34	1st	Finest selected, assorted sizes	... 110	100/-
35	1st	Do. do.	... 210	70/-
36	2nd	Good quality	... 110	80/-
37	2nd	Do. do.	... 210	55/-

Florida Sponges on Strings.

		Pieces.	Per string.			Pieces.	Per string.
A	Finest Wool, Bath sizes	... 12	30/-	J	Finest Velvet, Bath sizes	... 12	25/-
B	Do. do.	... 12	24/-	K	Do. do.	... 12	20/-
C	Do. do.	... 12	20/-	L	Do. medium sizes	... 15	18/-
D	Do. medium sizes	... 15	22/-	M	Do. do.	... 15	16/-
E	Do. do.	... 15	15/-	N	Do. do.	... 15	12/-
F	Do. do.	... 15	10/-	O	Do. do.	... 15	9/-
H	Do. medium small	... 15	7/6	P	Do. medium small	... 15	7/-
I	Do. do.	... 15	5/-	Q	Do. do.	... 15	4/6

Florida Sponges in Cases.

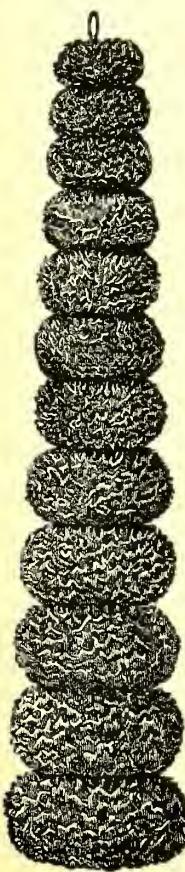
		Pieces.	Price case.			Pieces.	Price case.
FA	Finest Toilet and Bath	... 150	75/-	FD	Finest Toilet and Bath	... 100	150/-
FB	Do. do.	... 100	75/-	FE	Do. do.	... 100	200/-
FC	Do. do.	... 100	100/-				

West Indian Sponges (Raw) in Bales.

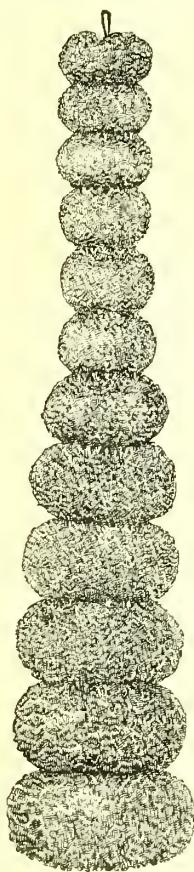
We hold the largest stock in Europe of these goods, and can quote exceptionally low prices.

Finest Wool	...	...	...	...	...	...	...	from	4/6 to 7/-
Finest Velvet	...	...	...	...	...	...	...	"	4/- to 6/6
Finest Yellow	...	...	...	...	...	...	...	"	1/6 to 2/6
Finest Grass	...	...	...	...	...	...	...	"	1/6 to 2/6
Finest Fino Reef...	...	...	...	...	...	...	...	"	3/- to 6/-
Finest Hardhead	...	...	...	...	...	...	...	"	2/- to 5/-
Finest Glove	...	...	...	...	...	...	...	"	1/- to 2/6

** Commoner qualities at all prices.



32 RED LION SQUARE, LONDON, W.C.



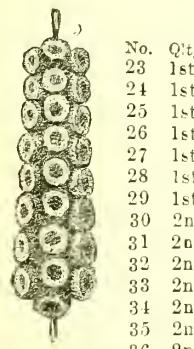
Sandless Sponges on Strings.

The Strings of Sponges, for which we quote below, are put in a form which will facilitate the trade of wholesale and general buyers considerably. They are compact, of excellent value, and well adapted for display.

HONEY-COMB SPONGES ON STRINGS.

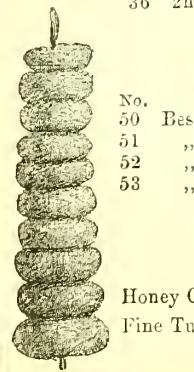
No.		On each string.						Per string.
		18 pieces...	18 "	18 "	18 "	12 "	12 "	
1	Best Toilet Honey-comb, 1st quality,							12/
2	" "	18	"	"	"			18/
3	" "	18	"	"	"			24/
4	" "	18	"	"	"			30/
5	" "	12	"	"	"			27/
6	Bath	12	"	"	"			36/
7	" "	12	"	"	"			48/
8	" "	12	"	"	"			60/
9	large "	6	"	"	"			36/
10	" "	6	"	"	"			48/
11	Good Toilet	18	"	"	"			9/
12	" "	18	"	"	"			12/
13	" "	18	"	"	"			18/
14	Bath	12	"	"	"			27/
15	" "	12	"	"	"			36/
16	" "	12	"	"	"			48/
17	Gool General	18	"	"	"			16/
18	" "	18	"	"	"			12/
19	" "	18	"	"	"			14/
20	" "	12	"	"	"			18/
21	" "	12	"	"	"			24/
22	" "	12	"	"	"			30/

FINE TURKEY SPONGES ON STRINGS.



No.	Q'ty.	On each Per			No.	Q'ty.	On each Per		
		string.	string.	string.			string.	string.	string.
23	1st Superior Fine Turkey Cups	... 12	18/		37	1st Sup. Small Fine Trky. Cups, 3 rnds.,	25	18/	
24	1st	... 12	24/		38	1st	"	"	"
25	1st	... 12	36/		39	1st	"	"	"
26	1st	... 12	48/		40	2nd Good	"	"	"
27	1st	... 12	60/		41	2nd	"	"	"
28	1st	... 12	72/		42	2nd	"	"	"
29	1st	... 12	84/		43	Good Fine Turkey Solids	"	"	"
30	2nd Good	... 12	15/	44					
31	2nd	... 12	20/	45					
32	2nd	... 12	30/	46					
33	2nd	... 12	40/	47					
34	2nd	... 12	50/	48					
35	2nd	... 12	60/	49					
36	2nd	... 12	72/						

FINE EGYPTIAN SPONGES ON STRINGS.

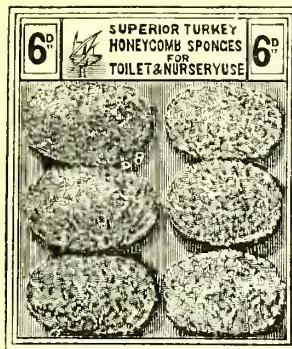


No.	On each string.						Per string.
	20 pieces on each string	20 "	20 "	35 "	35 "	35 "	
50							6/
51	20 "						9/
52	20 "						14/
53	small 35 "						6/

SANDED SPONGES (by weight).

Honey Comb	...	...	...	...	...	...	...	...	5/6 to 15/ per lb
Fine Turkey Toilet	...	...	...	...	...	...	...	...	10/ to 50/ "

R. CRESSWELL & Co., 32 Red Lion Square, London, W.C.



Sponges on Cards.

Sponges on Cards, as quoted below, have now a very large sale. Buyers are cautioned against inferior imitations of our goods. The Cards bearing our Trade Mark will be found vastly superior to all others in the following particulars, viz., value, appearance, and regularity of assortment.

The Cards can be supplied without prices on, for Export.



	Per doz. Cards.		Per doz. Cards.
Superior 1d. Honey-comb School, 1 doz. on card	... 7/-	Superior 1d. Turkey School, 1 doz. on card 7/-
" 2d. " Toilet " " " 14/-	" 2d. " Toilet " " " 14/-		
" 3d. " " " 21/-	" 3d. " " " 21/-		
" 4d. " " " 27/6	" 4d. " " " 27/6		
" 6d. " " " 21/-	" 6d. " " " 42/-		
" 1s. " " " 42/-	" 1s. " " " 84/-		
" 1s. 6d. " " " 63/-	" 1s. 6d. " " " 63/-		
" 2s. " " " 84/-	" 2s. " " " 84/-		
" 2s. 6d. " " " 105/-	" 2s. 6d. " " " 105/-		
" 3s. " " " 84/-	" 3s. " " " 84/-		
" 3s. 6d. " " " 100/-	" 3s. 6d. " " " 100/-		
" 4s. " " " 112/-	" 4s. " " " 112/-		
" 5s. " " " 105/-	" 5s. " " " 136/-		
" 7s. 6d. " " " 157/6	" 7s. 6d. " " " 212/-		
" 10s. " " " 210/-	" 10s. " " " 272/-		
" 2d. Pocket Slate Sponge and Label Damper (in handsome crystallized tin boxes, assorted colours) 1 doz. on card ... 14/-	" 3d. Egyptian Toilet, 1 dcz. on card ... 21/-		
6d. Sanitary Turkey on bone handles, 1 doz. on card 42/-	" 4d. " " " 27/6		
	" 6d. " " " 42/-		
	" 1s. " " " 84/-		
	" 1s. 6d. " " " 63/-		
	" 2s. " " " 84/-		
	" 2s. 6d. " " " 105/-		
	" 10s. " " " 272/-		
	" 3d. Egyptian Toilet, 1 dcz. on card ... 21/-		
	" 4d. " " " 27/6		
	" 6d. " " " 42/-		
	" 1s. " " " 84/-		
	" 1s. 6d. " " " 63/-		
	" 2s. " " " 84/-		
	" 2s. 6d. " " " 105/-		

** Special Discount off Carded Goods for large quantities.

Sandless Sponges (by Weight).

READY FOR USE.

HONEY-COMB SPONGES.

ASSORTED SIZES.

No.	Pieces to the lb.	Price per lb.
1	Finest selected Toilet and Bath shapes, of superior texture ... about 25	35/-
	Special Bath shapes and sizes ... 7 to 12	32/- & 35/-
2	Best Toilet shapes, fine and strong texture about 25	25/-
	Special Bath shapes and sizes ... 7 to 12	28/-
3	Ordinary Bath shapes, good and fine texture about 18	17/-
4	Good large Cuts, for Carriage, Household, and Stable use ... 16	14/-
4A	Superior Cuts for Bath & Toilet use ... 16	18/-
5	Medium sizes for general cleaning purposes 40	12/-
6	Sup. sm. shapes for Nursery use, &c. ... 72	13/-

May be had in handsome Blue Enamelled Cardboard Boxes of—

½ dozen at 4/-, 5/-, 6/-, 7/-, 8/- per box.

1 " 5/-, 6/-, 7/-, 9/-, 10/-, 12/-, 15/-, 18/- per box.

Superior large Bath shape, in boxes containing

1 sponge at 4/-, 4/-, 5/-, 5/-, 6/-, 7/-, 8/-, 9/-, 10/- each.



FINE TURKEY SPONGES.

ASSORTED SIZES.

No. Qty.	Pieces to the lb.	Price per lb.
1 Finest selected shapes and quality, about 50	120/- to 200/-	
2 First quality, superior texture, good shapes ...	45	80/-, 100/-
3 Second quality, ordinary shapes, fine texture ...	40	60/-, 80/-
4 Ordinary quality and shapes ...	60	40/-
5 First quality, Flat saddle ...	10 to 15	40/-
6 Second quality, Flat saddle ...	12, 18	30/-
7 First quality, fine Turkey Solids, about 45		50/-
8 Second quality do. ...	60	40/-
9 Fine Turkey pieces, good quality, 100 to 120		30/-

May be had in handsome Blue Enamelled Cardboard Boxes for the facility of buyers.

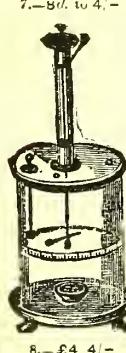
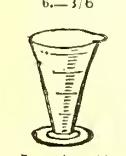
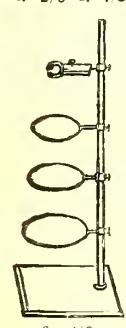
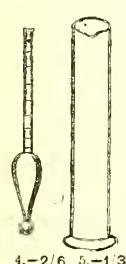
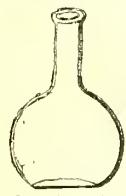
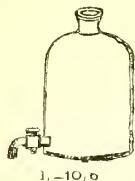
Boxes containing 1 dozen, at 4/-, 6/-, 8/-, 10/-, 12/-, 18/- per box.

" ½ " 12/-, 15/-, 18/-, 21/-, 24/- per box.

And upwards to 120/- per box of half-a-dozen.

TERMS: 2½ PER CENT. DISCOUNT, 3 MONTHS NETT.

See previous pages.



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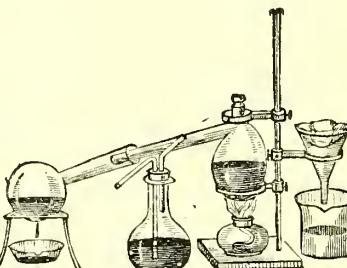
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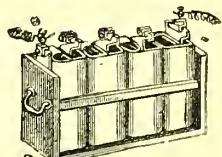
Finest BOHEMIAN
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GLASS AND PORCELAIN
**CHEMICAL
APPARATUS,**



ALSO
**PURE
CHEMICALS**
For Analysis,

*By appointment to Her Majesty's Honourable Board of Inland Revenue;
Science and Art Department and Government Schools at South
Kensington; the Pharmaceutical Society of Great Britain,
&c., &c.*

APPARATUS SECURELY PACKED FOR THE
COLONIES AND FOREIGN PARTS.

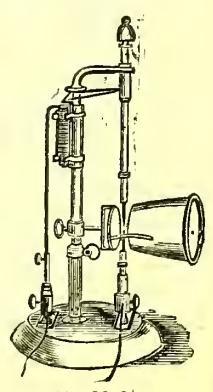
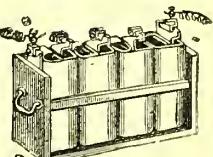
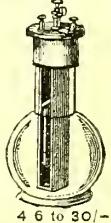
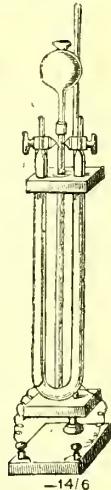
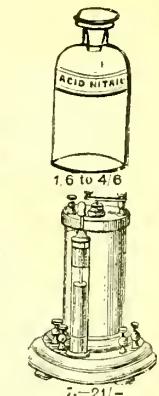


NEW PRICE LIST OF CHEMICAL APPARATUS,

Containing 600 Illustrations, price 6d.

Complete Illustrated Catalogue of Scientific Apparatus,
nearly 1,000 Woodcuts, price 2/6.

J. ORME & CO.,
65 BARBICAN, LONDON.



SUPPLEMENT TO "THE CHEMIST AND DRUGGIST."

SATURDAY, MAY 29, 1886.

i

Hunyadi János

CAUTION.—Circumstances which have come to the knowledge of Andreas Saxechnor, Buda Pest, Sole Proprietor of the Hunyadi János Spring, compel him to **WARN** the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the **LABEL** the name of "THE APOLLINARIS COMPANY (LIMITED), London."

SOUTH LONDON SCHOOL of PHARMACY,

325 KENNINGTON ROAD, S.E.,

Director: Dr. JOHN MUTER, M.A., F.I.C., F.C.S., &c.

ESTABLISHED 1ST OCTOBER, 1868.

EIGHTEENTH SESSION, 1885-6,

Will terminate on the 15th July.

NINETEENTH SESSION, 1886-7,

Will commence on the 15th September, 1886.

For Fees, &c., apply to W. BAXTER, Secretary.

THE LONDON HOMEOPATHIC HOSPITAL AND MEDICAL SCHOOL, GREAT ORMOND STREET.

A NEW WARD, unoccupied for want of funds, is much needed for Male Patients, and will be opened so soon as sufficient funds to support it are received. The Hospital now contains eighty beds. Trained Nurses are sent out at moderate fee for Medical, Surgical, or Accouchement cases, the latter specially Certificated.

G. A. CROSS, Secretary.

SPECIAL HALF-YEARLY ISSUE

OF

THE CHEMIST AND DRUGGIST

Will take place on July 31, 1886.

When Price Lists, Circulars, &c., can be inserted. Apply early to the Publisher for full particulars.

NOTICE. NEW PHARMACOPOEIA.

THE LAMELLÆ OF THE NEW PHARMACOPOEIA

Can be obtained in Bulk and in Tubes of THE ORIGINAL MAKERS,

SAVORY & MOORE, 143 NEW BOND STREET, LONDON.

ACCURATE STANDARD SOLUTIONS, INSTRUMENTS, AND
CHEMICALS FOR VOLUMETRIC ANALYSIS.

FRANCIS SUTTON & CO., NORWICH,

Supply first quality Wholesale and Retail Solutions and Apparatus for Analysis of Waters, Beers, Worts, Sugars, Urine, Metals, Alkalies Acids, Phosphates, Manures, Medicines, &c.

SPECIALITIES—Sensitive Nessler Test, Bright Clark's Soap Test, Fehling's Copper, Urat'nm, Silver, Mercury, Permanganate, Indigotine, all the New Indicators, Methyl Orange, Phenacetolin, Phenolphthalein, Laemoid, Corallin, Special Litmus, &c.

Price List mailed to any address. Foreign Orders executed with prompt despatch.

CHEMISTS' TRANSFERS.**MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.,
CHEMISTS' TRANSFER AGENTS,**

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION. Immediate attention given to Foreign Commissions.

The Business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1845, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

Particulars of any of the following will be sent free on application:—

1. LONDON, W.—First-rate locality; handsome shop; returns £650 yearly, with profits above the average; large house with private entrance; price about £500; vendor's health necessitates immediate sale.

2. LONDON, N.—Handsome fitted shop, situate in good position in a busy Thoroughfare; returns £750; good-sized house, with private entrance; price £750, or valuation if wished.

3. LONDON, S.—Retail and Dispensing; very pretty shop situate in a rapidly extending locality of good class; returns £600, increasing; price £325 cash.

4. MIDDLESEX.—Within 12 miles of Marble Arch, situate in a pretty locality; Retail and Dispensing Business; returns £325; very low rental, good garden; price £315.

N.B.—NO CHARGE TO PURCHASERS. Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free. Terms for Valuation on application.

ORRIDGE & CO.

BUSINESS WANTED.

WANTED, to Purchase a first-class Dispensing and Family or Mixed Business, returning about £800 or £1,200: cash ready. Particulars in confidence, M. P. S., 9 Birmingham Road, Levenshulme, Manchester.

BUSINESSES FOR DISPOSAL.**REVISED SCALE OF CHARGES.**

Announcements appearing under this heading are charged as follows:—

*Five Lines (Fifty Words) and under 3*l*.6*d*. Cash must be sent with order.*

BUSINESS (London suburb) for sale; returns last year £973 18*s*. 6*d*; large proportion dispensing and over specialities; every investigation permitted; thoroughly satisfactory reasons for disposal; no agents; splendid opening for dentistry. C. J., care of Mr. Stratton, 4 Archway Road, Upper Holloway, N. Price, one year's returns.

LIVERPOOL.—A select Family and Dispensing Business, in full working order, and in one of the most important suburbs; shop elegantly fitted, with every convenience; splendid house, with private entrance; lease will be given. Address, J. H., Messrs. Sumner & Co., Wholesale Druggists, Liverpool.

A GOOD OPENING for a Chemist in thickly populated, new part of Bromley, Kent; no other near; neighbourhood increasing; low rental, lease or otherwise; double frontage; anything suitable can be connected with it; just suit beginner with small capital. Apply, M. W., 1 Westmoreland Road, Bromley, Kent.

BIRMINGHAM (Suburbs).—In consequence of failing health, a ready-money Dispensing, Prescribing, and light Retail Pharmacy, with a little Dentistry; returning, principally under an assistant, £18 weekly, and capable of considerable increase; splendid house and premises, commanding position; price £500, cash only; a bargain. Address, Smith, Chemist, 1 Coventry Road, Birmingham.

5. MIDLAND Manufacturing Town.—Handsome well-fitted shop; returns £600; good profitable business; no residence, lock-up shop; price £300.

6. WEST OF ENGLAND.—Large seaport town; Dispensing and Retail Business; returns £500 yearly; well-established concern; price about £500.

7. WEST OF ENGLAND.—Capital situation in a large town; handsome shop; returns £750, largely from own proprietary goods; can easily be extended; valuation terms will be accepted.

8. KENT.—Good-class Business, with well-fitted shop; returns over £900 yearly; price about one year's returns.

Personal applicants receive

ORRIDGE & CO.

LANCASHIRE.—In one of the principal thoroughfares of a large manufacturing town, a light mixed Drug Business; satisfactory reasons for disposing of same. Address, Budworth, Messrs. Oldfield, Pattinson & Co., Manchester, or Messrs. Woolley & Co., Manchester.

A CHEMIST AND DRUGGIST'S BUSINESS for disposal, in a flourishing seaport town. Satisfactory reason for so doing can be given on application at 34 Villiers Street, Strand, W.C.

BIRMINGHAM.—For immediate disposal, light Retail and Dispensing Business; main thoroughfare; returns £300, under youth's management; good house; rent £35; price £100, part may remain, good security; cause of selling busy in mineral-water trade; chance seldom met with; stock worth all the money. Address, A. B., Wyleys & Co., Coventry.

£300.—London, W.—An old-established genuine Retail, Dispensing, and Prescribing Business; returns average about £9 weekly under a manager; good profits; improving suburb; price £300. Address, G., care of Mr. Gristwood, Messrs. Newbery & Son, King Edward Street, Newgate Street, London, E.C.

SOUTH DEVON.—Large town.—Genuine ready-money Retail, Prescribing, and Dispensing Business; no heavy trade; established over 30 years; changed hands once; returns £400 to £500; good profits; satisfactory reasons for disposal; full investigation invited; price £450; no agents. Address, B. E. W., 126 Bermondsey Street, S.E.

FOR IMMEDIATE DISPOSAL, a light Retail Business; good shop, well stocked, in principal thoroughfare, and capable of great improvement; small incoming, by valuation or otherwise; satisfactory reasons for disposal. Address, F., 16 Mandale Road, South Stockton-on-Tees.

CHEMIST AND DRUGGIST'S SHOP in Denbigh, North Wales; in leading street, and central for all parts, town and country; wide connection; rare opening for a man of energy. W. O. Roberts, The Groves, Chester.

TO CHEMISTS AND DRUGGISTS.

FOR immediate disposal, in Northamptonshire, a Light Retail, Dispensing, and Prescribing Business, doing a ready-money trade; in same hands 12 years; well fitted; small stock; feeble opposition; populous neighbourhood; proprietor giving up on account of continued ill-health; no reasonable offer refused. For further particulars, address, "Sigma," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

PARTNERSHIP.

ADVERTISER, accustomed to high-class business, desires a position in an established firm, where the investment of about £1,000 and introduction of several very valuable and well-known "Specialities," combined with energetic business qualifications, would warrant same; highest references to wholesale houses, &c.; particulars and interview by appointment. Address in strict confidence, "Partner," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO LET.

HARLESDEN, near Willesden Junction.—To be Let, Shop in Fortune Gate Terrace, with good residence; in a splendid position for a first-class Chemist: adjoining the Police Station and National Bank: in best part of Harlesden, N.W.; rent £80; stables if required. Apply to H. Wakefield, opposite shop.

EMPLOYERS WANTING ASSISTANTS.

ACHEMIST'S ASSISTANT, acquainted with mechanical dentistry; an improver or one who has served part of his time would suit. Apply to Mr. Carveth, Chemist, King Street, Plymouth.

WANTED, an Assistant for a French pharmacy, who wishes to learn French dispensing and pharmacy; to board and lodge with proprietor. Applicant to give references, state terms, and all particulars, when applying, to "Marseilles," care of Southall Brothers & Barelay, Birmingham.

TRAVELLER (experienced) wanted for London Drug and Spice Grinding, with good connection and knowledge of the trade. Apply by letter, with full particulars, B. B., 154 Leadenhall Street, E.C.

FRDERICK GIBSON, Chemist, Gooch Street, Birmingham, requires an active Assistant, who can be well recommended by his previous employers; salary about £30; business of a light nature; opportunity given to attend trade classes. Address as above, with every necessary particular. Applicants, if not replied to in 3 days, declined.

QUALIFIED MANAGER for an Indian business; 3 years' agreement; highest references required, and first-class experience indispensable. By letter, stating terms, with fullest particulars, D 377, care of Messrs. Deacon, Leadenhall Street, E.C.

ASSISTANTS WANTING SITUATIONS.

*Announcements appearing under this heading are charged
12 WORDS FOR 1s.;
every additional 3, 4, or 6 words 6d.*

WANTED, employment three or four afternoons or evenings a week. "Chemicus," Pinder, Wills' College, Trinity Square, S.E.

AS ASSISTANT or Manager; temporary or otherwise; good references; good experience; aged 30. "Minor," Willan, Chemist, Preston.

JUNIOR; 6 years' varied experience; aged 22. "Chemicus," 78 York Road, Leeds.

MISCELLANEOUS.

TO MANUFACTURING CHEMISTS.

THE ADVERTISER requires a quantity of Baking Powder supplied, and put up to a special formula, carefully prepared and packed; labels found. Address, W. H., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

COMMISSION is offered to a good Traveller, for the South and West of England, by the manufacturers of well-known goods, sold by all Chemists; an opening also for Scotland. Apply by letter to 159 62, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ACITY HOUSE is open to Represent a manufacturer whose goods would sell among Wholesale Chemists; would be prepared to facilitate business by cash payments, and find capital for holding stocks: firms of high standing alone treated with. Apply, "Alpha," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

THE PROPRIETORS of an old-established Ammonia Soda Factory, manufacturing an excellent product equal to that of Solvay, are prepared to treat for the sale of their process of manufacture in England; they would also supervise the erection and starting of works; their process enables ammonia-soda to be turned out at the cheapest imaginable price, which is practically proved by the German works now manufacturing the article. Particulars may be had upon application by letter, marked No. 812, to Rudolf Mosse's Advertising Offices, 18 Queen Victoria Street, London, E.C.

THE BIRMINGHAM EXCHANGE.
ADVERTISING.

NOTICE is hereby given that arrangements have been made by which certain portions of the walls of this Exchange will be let by Tender for Advertising purposes. Full particulars as to the conditions, &c., on which it is proposed to let such spaces will be supplied by the Secretary on receipt of stamped addressed envelope.

By Order of the Committee,
Secretary's Office, May 11, 1886.

W. F. HAYDON, Secretary.

TOILET SOAPS AND PERFUMERY.

Chemists get the Best Quality at Lowest Prices direct from the Manufacturers. Before purchasing your Spring Stock send for J. W. MARTIN & CO.'S PRICE LIST, PENGE, LONDON, S.E. (No Travellers)

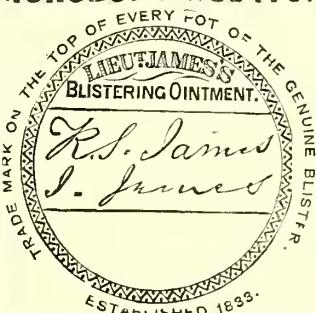
ESTABLISHED 1833.

HORSES.—LIEUT. JAMES'S BLISTER.

CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farrington Street, London, and Messrs. Raimes & Co., Edinburgh, are now and have been Agents 52 years.



AGENTS:—Sutton & Co., 10 Bow Charntry; W. Edwards & Son, 157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoyne, Burbridge & Co., 16 Coleman Street; Lynch & Co., 171 Aldersgate Street; Southall Brothers and Barclays, Birmingham; R. Hovenden & Sons, 93 & 95 City Road, Finsbury; Sanger & Son, 150 Oxford Street; Millard & Sons, 10 Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries Company, Virginia St., Glasgow; John Thompson, 53 Hanover Street, Liverpool; Boileau & Co., Bridge Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Clarke & McMullen, Victoria Street, Belfast; D. Galbraith, Londonderry; M. C. Delaere, Pharmacie Anglais, Bruxelles. And by all Chemists, in Pots, 1/6, 2/9, 5/-, and 1/-.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Felton, Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co.; DUNEDIN and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Stanistreet & Co.

W. H. JAMES. Sole Manufacturer, STAMFORD, FARNSWORTH, BERKS. Advertised in "Bell's Life" 56 years. Beware of Spurious imitations.

EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word. If name and address are not included, one penny per word must be paid.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The Purchaser of anything advertised in the Exchange Column may remit the amount to us. We acknowledge receipt to both parties by post-cards, and only pay the money deposited on the advice of the remitter. Whether returned to him or paid to the seller, we charge a commission of 6d. on any transaction of 3*l.* or less, or 1*s.* if above that amount.

Please note that the Exchange Column appears Weekly. Advertisements must be received not later than Thursday next. Chemists will do well to look up their Surplus Stock and send an Advertisement of same.

FOR DISPOSAL.

Drugs and Chemicals.

1 lb. oil mint, 15*s.*; 5 lbs. ess. lemon, 6*s.* 6*d.* 1*b.*; 3*½* lbs. potass. iodid., 9*s.* 6*d.* 1*b.*; 4 lbs. potass. bromiil, 1*s.* 8*d.* 1*b.* Spencer, Lingdale in Cleveland.

Proprietary Articles.

Gall's pills, Virginian gum, Harvey's bark pills, and other patents at half wholesale prices; list supplied. Weddell, Colchester.

Three doz. Colman's extract meat and malt wine; offers wanted. B. Newham & Co., Sheffield.

Holman's liver pad, 10*s.*; 2 James' fever powder (Kidde's), 4*s.* 6*d.*; Gonild's asthma cure, 10*s.*; ol. cubeba, 8 oz.; bismuth oxyd., 4 oz.; argent. oxid., 1 oz.; ext. belae liq., 3*viiij.*; what offers? Watson, Caistor, Lincolnshire.

Six 13*½* d. Mather's pills; 1 lb. Schadt's bismuth; 1, 2*s.* 6*d.* Cheltenham salts; 2, 1*s.* Bishop's citrate magnesia; 11*s.* Roo's gutta vite; 11*s.* balu of syriacum; 2*s.* 9*d.* Gage's tonic, anti-phlegmatic; 2, 1*s.* Bragg's lozenges; 2, 13*½* d. Boult's embrocation; 13*½* d. Simeo's gout pills; Rowan's worm powders; offers wanted. Wilks, Burnley.

Educational.

"Notes on Dispensing," specially written for Minor students; post free 12 stamps. Tully, Chemist, Hastings.

Literature.

Squire's "Companion," 1882, good condition, 5*s.* Jones, 403 Caledonian Road.

Last 10 years' *Chemist and Druggist*, unbound; what offers? Walter Stead, Westgate, Heckmondwike.

Muspratt's "Chemistry," latest edition, in 2 vols., handsomely bound, cost 75*s.*, will sell for 40*s.* R. Lyon, Chemist, Ipswich.

Bargin.—Attfield's "Chemistry," good condition, 6*s.*; Wills' "Materia Medica," with Notes, an offer. Boyd, 60 Prescot Street, London Road, Liverpool.

To Students.—"Hints on Pill-making," a guide in the manipulation of difficult pills; post-free 7 stamps. Clifton, 13 St. Michael's Terrace, Wood Green, London.

Squire's "Companion," 1880, good order; Attfield's "Chemistry," fourth edition, good order; Martindale's Extra Pharmacopœia, new; British Pharmacopœia, new; what offers? Palmer, Aylesbury.

Chemist and Druggist, single copies 9*d.* and 1*s.* vols. 4*s.* 6*d.* from 1851; *Journal*, odd from 1872, 2*½* *d.*; Diary to 1880 and 1882, 2*s.* 6*d.*; all carriage free; or what offers? Williams, Chemist, Coleford, Gloucestershire.

Soda-water Plant.

Nearly new soda-water-plant, cheap.—1 pair 2*½*-inch pumps, on stand; 1, 24-gallon copper condenser, on stand, by Barnett & Foster; 1, 25-gallon jacketed pan; 2, 16-gallon cylinders, on stands, fitted with agitators by Hayward Tyler; 1, 30-gallon lead generator; 1 large gasholder and tub; 2 McEwen's turnover filters; 1 Hayward Tyler's ditto; 1 Codd's filter; 1 Manchester bottling-rack; 1, 618*b.* Hayward Tyler's bottling-rack; 2, 10-gallon portable cylinders; shafting, pulleys, &c. Idris & Co., Ascham Street, Kentish Town, N.W.

Shop Fittings.

Surplus Stock.—Mahogany shop-front sash, 139 in. by 111*½* in., 30*s.*; mahogany case, 73*½* long, 21 in. wide, 19*½* in. high, bent plate lifting flaps, silvered-plate ends, glass divisions, 7*s.* 10*s.*; counter-case, 52*½* in. by 24 in. extreme, bent plate lifting flaps, sloping and flat shelves, 6*t.*; plate-glass fascia, embossed "Pharmaceutical Chemist," 14*½* in. by 14 in., 3*s.* 10*s.*; 3, 15-in. marble mortars, 15*s.* each; pestles, 2*s.* 6*d.* to 5*s.* W. Hawke & Son, Wild Court, Great Wild Street, London.

Formulae.

Great Novelty.—Entirely new series, formulæ for popular medicines, toilet articles, domestic requisites, veterinary medicines; elaborate description of attractive get-up, and sketch label; "red clover blood cleanser," "castor-oil substitute," "tonic saline," "blackberry astringent cordial," "liquid catarrh cure," "May-dew lotion," "infant's tonic salt," 100 others; catalogues sent; 2*s.* 6*d.* each, 10 for 1*b.* Frank Cherry, Markhouse Road, Walthamstow.

Gonorrhœa, syphilis, gleet, and venereal taint; set of eight practical recipes, with full directions for use, and distinguishing the various phases of these diseases, following which will entirely prevent that confounding of the symptoms of these disorders which so frequently occurs in counter prescribing; 3*s.* 6*d.* the set. Set veterinary receipts, 12, 3*s.* 6*d.*; superior perfume, miscible chlorodyne chemical food, costs 3*½* d. pound; hair stimulant, entirely new, glycerine, cucumber, and honesuckle, for the skin, 1*s.* each, three 2*s.* Arthur Johnson, 64 Furness Hill, Sheffield.

Please take note! Elegant, saleable, and profitable proprietaries may be sold by chemists purchasing my recipes: guaranteed genuine formulæ, which have never been published; exchanged if not approved; price 1*s.* 1*d.* each, 6 for 5*s.*, 25 for 1*b.*, post free, with full directions for making, and all particulars. "New Remedy for Toothache," gives instant relief, not injurious, never fails, easily and inexpensively made; "Nigerine" patent blacking, superior to Nubian, much cheaper and less injurious to leather; "Digestive Relish," cheapest, best, and most piquant appetising sauce in creation, 3*s.* gal.; "Lapuline Bitters," guaranteed in every respect superior to "Hop Bitters," at quarter price, excellent preparation, invariably preferred; "Lime Cream and Glycerine," perfectly inseparable, snow-white and creamy, combination of elegance, excellence, and cheapness; "Foaming Dentifrice," like Floriline, one-eighth cost, creates cleansing, foaming lather, whitening the teeth, sweetening the breath; "Red Rose Lotion," invaluable at seaside resorts, removes freckles, sunburn, &c., cooling and curative, preferable to sulpholine; "Rheumatic Embrocation," cheapest, most efficacious, and elegant liniment ever made, vastly superior to Jacobs oil. Detailed list of 300 post free. T. Brooks, Chemist, Louth, Lincolnshire. [1]

Please take note! Elegant, saleable, and profitable proprietaries may be sold by chemists purchasing my recipes, guaranteed genuine formulæ, which have never been published; exchanged if not approved; price 1*s.* 1*d.* each, 6 for 5*s.*, 25 for 1*b.*, post free, with full directions for making and all particulars. "Tonic Hair Lotion," transparent liquid, with aromatic invigorating odour, cleansing and strengthening; "Blood-purifying Powder," very profitable, of more medicinal worth than any blood mixture advertised, invaluable spring medicine; "Amygdaline Balm," better than milk, roses, or dangerous skin lotions, simple and elegant, most useful seadie adjunct; "Very Last Bouquet," entirely new odour, simply sweet and refreshing, sure to become popular; "Antiseptic Coralline Tooth Paste," much liked, resembles Oriental, very cleansing, sweetly perfumed; "Astringent Dentifrice," specially adapted for soft and spongy gums, whitens the teeth and prevents decay; "Quinine and White Rose Tooth Powder," delicate pearly powder, better than Rowland's Odonto, being more economical and equally nice; "Oosnyxia," "Musk Rose," sachet powders, sweetest of the sweet, full bodied and enchantingly pure aroma. Detailed list of 300 recipes post free. T. Brooks, Chemist, Louth, Lincolnshire. [2]

MISCELLANEOUS.

7 lbs. insect powder, 8s., carriage paid ; "enterprise" tinature press, 10s. 270/26.
 Microscope, 50s., cost 70s. Harris, 170 New Cross Road, S.E.
 Iron tinature press, half gallon, Maw's, fig. 20, 5s. Walter Stead, Westgate, Heckmondwike.
 Model Norwegian boat (Southall), 9s., or offers. Walter Stead, Westgate, Heckmondwike.
 Several dozens 2s. 9d. size Steedman's powders, Scott's pills, Cockle's pills, Holloway's pills ; cash offers. 271/25.
 What offers for seven 2s. 6d. Lieut. James's blistering ointment ; eleven 1s. 6d. ditto ; ten 2s. Chapman's cattle oils ; nine 2s. 6d. ditto ; two 5s. ditto. Mason & Co., King Street, South Shields.

Every Chemist should make his own emulsion. "Cod-liver Oil Emulsion with Hypophosphites" (like Scott's), contains 50 per cent. of pure oil ; formulæ with instructions, 5s. 14/253.

Few dozen Gordon's extract, 16s. dozen, delivered free in London ; twelve dozen 3d. Hill's vermin powder, fresh, 1s. 2d. dozen, post free, cash with order. Harkness, Eastover, Bridgwater.

Surplus sponge, about 300 pieces, 10 to 12 to 1b., suitable for eab, carriage, and stable use, 3s. 6d. lb., 4-lb. lots carriage paid ; surplus patents—7 Watson's castor-oil pills, 7½d. 2s.; 4, 1s. 1½d. 2s.; 5 family, 2s. 6d.; 6 Hartlin's crimson salt, 1s. 1½d. 3s.; 8 Kay's pills, *Linum catharticum*, 1s. 1½d. 4s., good condition. Robison, Chemist, Myton Place, Hull.

WANTED.

Glass percolator ; state price. Jones, 403 Caledonian Road.

Large mortar, about 18 inches diameter. Hopkinson, Chemist, Nottingham.

One shilling each given for *Chemist and Druggist*, May 1883, August 1834. Hamilton, Chemist, Walthamstow.

Wax of all kinds bought for re-melting. Simple and price to Entwistle, 39 Shaw Street, Liverpool.

Tin spring blind roller, about 19 ft. 6 in. long, with iron filling ; state price. Apply, Drug Stores, Malvern.

Old gold, silver, and dental metals ; highest price given, in cash or good mechanical work. Entwistle Brothers, Dentists, 39 Shaw Street, Liverpool.

Formula of remedy for bunions ; must be reliable ; purchase of a proprietary entertained. "Betts," care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

HALF-YEARLY SPECIAL ISSUE OF THE CHEMIST AND DRUGGIST, JULY 31, 1886.

PRICE LISTS, CIRCULARS, &c., will be received for that issue.

APPLY FOR FULL PARTICULARS TO

THE PUBLISHER, 42 CANNON STREET, LONDON, E.C.

Established near Three-Quarters of a Century.]

[Registered Trade Mark, an OAK TREE.

HENRY BOND'S ORIGINAL INDELIBLE "OAK TREE" MARKING INK,

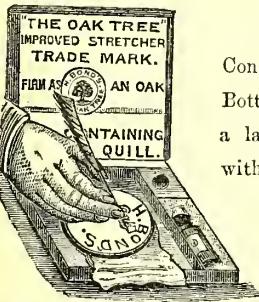
WARRANTED TO REMAIN FLUID IN ALL CLIMATES,

Prepared only by J. CHRISTIAN, Sole Proprietor.

A thorough GENUINE and reliable JET BLACK INK, which in the simple method of its application, durability, and being impossible to injure the finest Fabric, surpasses every other preparation used for the same purpose. Can be used with or without the application of heat ; put up in all convenient forms, for EXPORT AND COUNTER TRADE.

6d. and 1s. in Blue Wrapper, Red Trade Mark, boxed or carded in 1 dozen. 6d. and 1s. Pedestals, with Stretcher, in 2-dozen and 1 dozen boxes. ½-oz. and 1-oz. Stoppered Bottles in boxwood boxes, for the use of Large Establishments, Retail, 2s. 6d. and 5s. Each Bottle well filled and securely corked and Warranted NOT TO DRY UP IN THE BOTTLE.

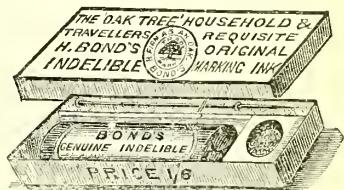
Complete Illustrated Price List on application. Write for Handsome Show-card, Handbills, and Specimen on Linen. Liberal Discounts to Shippers and the Trade.

**SPECIALITY.**

Consisting of a Large Glass Stoppered Bottle of BOND'S GENUINE INK, a large Improved Stretcher covered with Wash-leather, and two hand-cut Quill Pens.

To Retail at 1s. 6d. each.

Consisting of a Large Patent Stoppered Bottle of BOND'S GENUINE INK, and one of Seofield's Marking Pens, for Marking the most difficult Fabrics, both secured in a handsome box.

SPECIALITY.

Directions for use in English, French, German, and Spanish.

To Retail at 1s. 6d. each.

Packed for the Trade in handsome Counter Boxes, containing 12-dozen.

IMPORTERS and the TRADE are respectfully CAUTIONED against SPURIOUS IMITATIONS. The ORIGINAL and GENUINE H. BOND'S INDELIBLE MARKING INK bears the Trade Mark, an OAK TREE, and the name "CHRISTIAN" on each Wrapper and Box. Two injunctions have been granted, HENRY BOND'S Legal Successor restraining the use of the name "H. BOND'S MARKING INK," one as recently as

the 17th of November, 1882.

To be obtained through all the leading Wholesale Chemists and Druggists in England.

Only Address, J. CHRISTIAN, 46 City Road (near Finsbury Square), LONDON.

SPONGE IMPORTERS AND MERCHANTS.

CRESSWELL BROTHERS.

13a Red Lion Square,
London, W.C., 1st May, 1886.

And at the PIRÆUS, SMYRNA, and the BAHAMAS.

Dear Sirs,

We have the pleasure of informing you that we have commenced business at the above address as *Sponge Importers and Merchants*. The experience and knowledge gained by us during our long connection with the firm of our father (trading as R. Cresswell & Co.) we thus put before our numerous friends and acquaintances in the trade, in full confidence of obtaining their patronage.

We are glad to be able to state that we have made arrangements for obtaining our supplies in the Mediterranean and elsewhere under more advantageous conditions than those enjoyed by any other firm, and have been fortunate enough to obtain the services and support of our uncle, the only resident English buyer in the Levant, whose trade-knowledge and personal influence are unequalled. Arrangements have also been concluded by us for obtaining supplies from the West Indian, Cuban, and other fishing grounds under exceptionally favourable conditions. By means of these facilities, together with an improved system of conducting our home business, we are enabled to offer goods cheaper than any other house.

Tusting soon to be favoured with your esteemed orders,

We are, dear Sirs, yours faithfully,

Cresswell Brothers.

D Sponges adapted specially for Druggists, Perfumers, Saddlers, Brushmakers, Drapers, Fancy Warehouses, &c., will be found fully described in the following Price List—by the Case, Piece, or Weight, Sandless or in Sand; on Strings, Cards, and in Blue Card Boxes.

CUBAN SPONGE.

We have secured from the Cuban Sponge Fishing Company, who hold special concessions from the Cuban Government, the sole and exclusive right of selling their Goods in the United Kingdom and Colonies. As this Company has the monopoly of the newly-discovered Cuban Fine Sponge all orders must be sent direct to us. This Sponge combines the various desiderata of strength, fineness, and cheapness, and is, therefore, certain to become immensely popular. To enable our customers to judge of its striking merits, we have prepared sample boxes containing an assortment of sizes, price 10s. The following are the various assortments we keep:

C1	Cuban Fine	...	...	...	100 pieces	£5 0 0	C8	Cuban Honey-Comb, 1st quality	150 pieces	£5 0 0
C2	Do.	...	...	...	150	" 5 0 0	C9	Do.	200	" 5 0 0
C3	Do.	...	...	...	200	" 5 0 0	C10	Do.	400	" 5 0 0
C4	Do.	400	" 5 0 0	C11	Do.	2nd quality	100 "	3 15 0
C5	Cuban Honey-Comb, 1st quality	50	"	5 0 0	C12	Do.	do.	150	"	3 15 0	
C6	Do.	do.	75	"	5 0 0	C13	Do.	do.	225	"	3 15 0
C7	Do.	do.	100	"	5 0 0	C14	Do.	do.	400	"	3 15 0

PLEASE NOTE STYLE AND ADDRESS OF FIRM.

See three following pages.

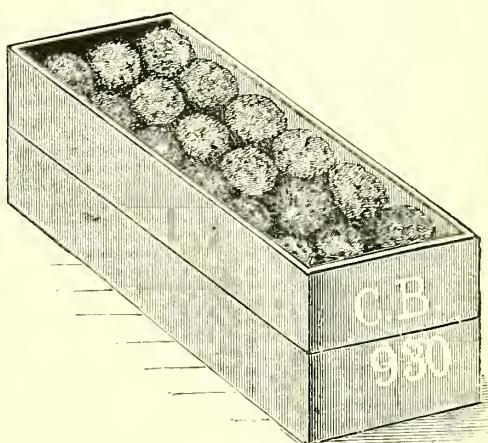
CRESSWELL BROTHERS, 13a Red Lion Square, London, W.C.

SPONGES IN CASES.

SANDED OR SANDLESS.

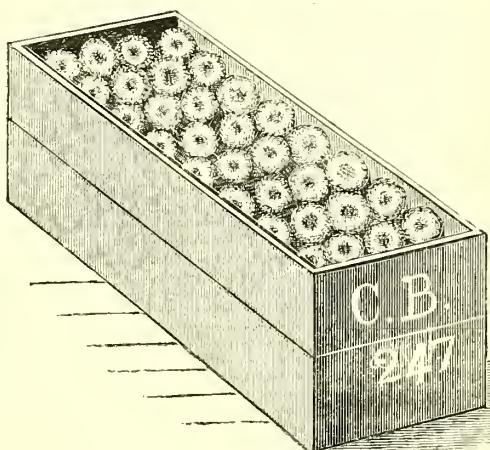
HONEY-COMB SPONGES.

No.	Qlty.		Pieces in Case about	Price Case
1	1st	Finest selected shapes, assorted sizes	120	240/-
2	1st	Do.	75	140/-
3	1st	Do.	45	80/-
4	1st	Small selected shapes	280	140/-
5	1st	Superior do. large Bath sizes	25	140/-
6	2nd	Do. quality shapes, assorted sizes	125	160/-
7	2nd	Do. do.	73	84/-
8	2nd	Good quality shapes, small	280	70/-
9	2nd	Do. large Bath sizes	25	100/-
10	3rd	Do. assorted sizes	145	105/-
11	3rd	Do. do.	85	70/-
12	3rd	Do. large Bath sizes	25	60/-
13	4th	For Stable use, &c.	100	50/-



FINE TURKEY SPONGES.

No.	1st	Fine selected Cups, assorted sizes	... 110	360/-
15	1st	Do. do.	... 60	200/-
16	1st	Do. Bath sizes	... 35	240/-
17	2nd	Superior Cups, assorted sizes	... 110	240/-
18	2nd	Do. do.	... 60	140/-
19	2nd	Do. Bath sizes	... 35	180/-
20	3rd	Finest Cups, assorted sizes	... 110	180/-
21	3rd	Do. do.	... 65	105/-
22	3rd	Do. Bath sizes	... 35	140/-
23	1st	Turkey Solids, assorted sizes	... 100	140/-
24	2nd	Do. do.	... 100	110/-
25	1st	Flat Saddle, assorted sizes	... 50	190/-
26	1st	Do. do.	... 30	120/-
27	2nd	Do. do.	... 50	130/-
28	2nd	Do. do.	... 30	80/-



BROWN TURKEY SPONGES.

No.	Qlty.		Pieces in Case	Price Case
29	1st	Finest selected, assorted sizes	130	90/-
30	1st	" "	70	55/-
31	2nd	Superior quality "	130	63/-
32	2nd	" "	70	40/-
33	3rd	Slate quality "	300	25/-

FINE EGYPTIAN SPONGES.

No.	Qlty.		Pieces in Case	Price Case
34	1st	Finest selected, assorted sizes	110	100
35	1st	" "	210	70/-
36	2nd	Good quality "	110	80/-
37	2nd	" "	210	55/-

PLEASE NOTE STYLE AND ADDRESS OF FIRM.

CRESSWELL BROTHERS, 13a Red Lion Square, London, W.C.

SPONGES ON STRINGS.

The Strings of Sponges, for which we quote below, are put in a form which will facilitate the trade of wholesale and general buyers considerably. They are compact, of excellent value, and well adapted for display.

FLORIDA SPONGES ON STRINGS. HONEY-COMB SPONGES

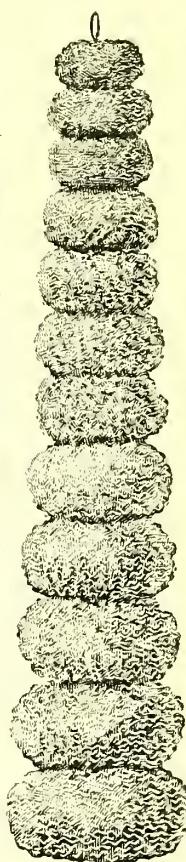
	Pieces	Per String
A Finest Wool, Bath sizes	12	30
B "	12	24
C "	12	20
D " medium sizes	15	22
E "	15	15
F "	15	10
H " medium small	15	7 6
I "	15	5
J Finest Velvet, Bath sizes	12	25
K "	12	20
L " medium sizes	15	18
M "	15	16
N "	15	12
O "	15	9
P " medium small	15	7
Q "	15	4 6

ON STRINGS.

No.	Per	
No.	Qty.	Pcs. strg.
1	Best Toilet Honey-Comb, 1st	18 12
2	" "	18 18
3	" "	18 24
4	" "	18 30
5	" "	12 27
6	" Bath	12 36
7	" "	12 48
8	" "	12 60
9	" large	6 36
10	" "	6 48
11	Good Toilet	2nd 18 9
12	" "	18 12
13	" "	18 18
13a	" "	12 16
13b	" "	12 20
14	" Bath	12 27
15	" "	12 36
16	" "	12 48
17	Good General	3rd 18 16
18	" "	18 12
19	" "	18 14
20	" "	12 18
21	" "	12 24
22	" "	12 30

FLORIDA SPONGES IN CASES.

	Pieces	Price
FA Finest Toilet and Bath	150	75
FB "	100	75
FC "	100	100
FD "	100	150
FE "	100	200



FINE TURKEY SPONGES ON STRINGS.

No.	Qnty.	On each string.	Per string.	No.	Qnty.	On each string.	Per string.
23	1st Superior Fine Turkey Cups	... 12	18	37	1st Sup. Small Fine Trky. Cups, 3 rnds,	25	18
24	1st "	12	24	38	1st "	"	25 24
25	1st "	12	36	39	1st "	"	25 30
26	1st "	12	48	40	2nd Good	"	25 15
27	1st "	12	60	41	2nd "	"	25 20
28	1st "	12	72	42	2nd "	"	25 25
29	1st "	12	84	43	Good Fine Turkey Solids	"	25 9
30	2nd Good	12	15	44	"	"	25 12
31	2nd "	12	20	45	"	"	25 18
32	2nd "	12	30	46	"	"	25 25
33	2nd "	12	40	47	"	"	25 33
34	2nd "	12	50	48	"	"	25 39
35	2nd "	12	60	49	"	"	25 48
36	2nd "	12	72				

FINE EGYPTIAN SPONGES ON STRINGS.

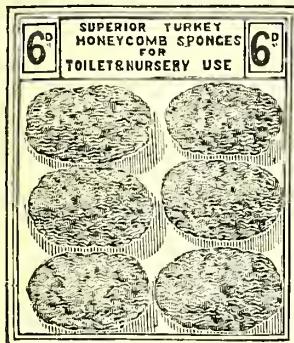
No.	Quality.	Per string.
50	Best Egyptian, 20 pieces on each string	... 6
51	" 20 "	... 9
52	" 20 "	... 14
53	" small 35 "	... 6

PLEASE NOTE STYLE AND ADDRESS OF FIRM.

See facing and two preceding pages.

CRESSWELL BROTHERS, 13a Red Lion Square, London, W.C.

SPONGES ON CARDS.



Sponges on Cards, as quoted below, have now a very large sale. Buyers are cautioned against inferior imitations of our goods. Our Cards will be found vastly superior to all others in the following particulars, viz., value, appearance, and regularity of assortment.

THE CARDS CAN BE SUPPLIED WITHOUT PRICES ON, FOR EXPORT.

		Per doz. Cards.		Per doz. Cards.	
Superior	1d. Honey-Comb School, 1 doz. on card	... 7/-	Superior	1d. Turkey School, 1 doz. on card...	... 7/-
"	2d. Toilet	... 14/-	"	2d. Toilet	... 14/-
"	3d.	... 21/-	"	3d.	... 21/-
"	4d.	... 27 6/-	"	4d.	... 27 6/-
"	6d.	... 21/-	"	6d.	... 42/-
"	1s.	... 42/-	"	1s.	... 84/-
"	1s. 6d.	... 63/-	"	1s. 6d.	... 63/-
"	2s.	... 84/-	"	2s.	... 84/-
"	2s. 6d.	... 105/-	"	2s. 6d.	... 105/-
"	3s.	... 84/-	"	3s.	... 84/-
"	3s. 6d.	... 100/-	"	3s. 6d.	... 100/-
"	4s.	... 112/-	"	4s.	... 112/-
"	5s.	... 105/-	"	5s.	... 136/-
"	7s. 6d.	... 157 6/-	"	7s. 6d.	... 212/-
"	10s.	... 210/-	"	10s.	... 272/-
"	2d. Pocket Slate Sponges in crystallized tin boxes, 1 doz. on Card,	14/-	"	3d. Egyptian Toilet, 1 doz. on card	21/-
"	3d. in crystallized tin boxes, 1 doz. in box	21/-	"	4d.	... 27 6/-
"			"	6d.	... 42/-
"			"	1s.	... 84/-
"			"	1s. 6d.	... 63/-
"			"	2s.	... 84/-
"			"	2s. 6d.	... 105/-
6d. Sanitary Turkey on bone handles, 1 doz. on card ...	42/-		"		

* * * SPECIAL DISCOUNT OFF CARDED GOODS FOR LARGE QUANTITIES.

SANDLESS SPONGES (by Weight).

READY FOR USE.

HONEYCOMB SPONGES (Assorted Sizes).

No. Qty.	Pieces to the lb.	Price per lb.
1 Finest selected Toilet and Bath shapes, of superior texture	... about 25	35/-
Special Bath shapes and sizes	7 to 12	32/- & 35/-
2 Best Toilet shapes, fine and strong texture	... about 25	25/-
Special Bath shapes and sizes	7 to 12	28/-
3 Ordinary Bath shapes, good and fine texture	... about 18	17/-
4 Good large Cuts, for Carriage, Household, and Stable use	" 16	14/-
4a Superior Cuts for Bath & Toilet use	" 16	18/-
5 Medium sizes for general cleaning purposes	... 40	12/-
6 Sup. smal. shapes for Nursery use, &c.	" 72	13/-

May be had in handsome Blue Enamelled Cardboard Boxes of $\frac{1}{2}$ dozen at 4/-, 5/-, 6/-, 7/-, 8/- per box.

1 " 5/-, 6/-, 7/-, 9/-, 10/-, 12/-, 15/-, 18/- per box.

Superior large Bath shape, in boxes containing 1 sponge, at 4/-, 4/6, 5/-, 5/6, 6/-, 7/-, 8/-, 9/-, 10/- each.

FINE TURKEY SPONGES (Assorted Sizes).

No. Qty.	Pieces to the lb.	Price per lb.
1 Finest selected shapes and quality, about 50	120/- to 200/-	
2 First quality, superior texture, good shapes	... 45	80/-, 100/-
3 Second quality, ordinary shapes, fine texture	... 40	60/-, 80/-
4 Ordinary quality and shapes	... 60	40/-, 60/-
5 First quality, Flat saddle	... 10 to 15	40/-
6 Second quality, Flat saddle	... 12 to 18	30/-
7 First quality, fine Turkey Solids, about 45		50/-
8 Second quality do.	... 60	40/-
9 Fine Turkey pieces, good quality, 100 to 120		30/-

May be had in handsome Blue Enamelled Cardboard Boxes for the facility of Buyers.

Boxes containing 1 doz., at 4/-, 6/-, 8/-, 10/-, 12/-, 18/- per box.

" " 12/-, 15/-, 18/-, 21/-, 24/- "

" And upwards to 120/- per box of half-a-dozen.

TERMS: 2½ PER CENT. DISCOUNT, 3 MONTHS NETT.

PLEASE NOTE STYLE AND ADDRESS OF FIRM.

MENTHOL CONES—A1 BRAND.

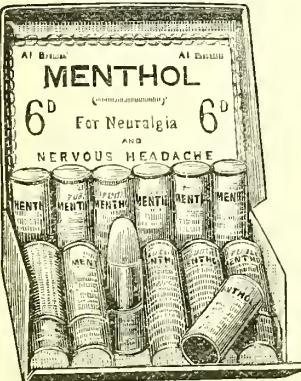


No. 12,
Polished Sycamore,
3 6 per doz.

*Special Terms to Shippers
and Large Buyers.*

We still continue to give away an empty Show-case with 2 doz. 1/ and 1 doz. 6d, sizes, or 5 doz. 6d, of our brand. The case is 11 in, long by 5 1/2 in. deep, and the lid lifts so that the goods can be sold from it, making it both a useful and attractive addition to a chemist's counter.

No. 15.



.6 Cardboard, pocketable, pretty, saleable, 3 4 per doz.

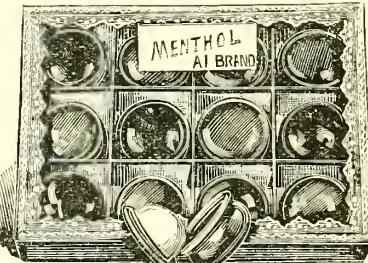
Write for NEW PRICE LIST, seat post free on application. Want of space prevents our drawing sufficient attention to Novelties, &c., but in Price List full particulars are given.

GUARANTEED PURE JAPAN MENTHOL. NO STAMP REQUIRED.

Nos. 9 & 9a.

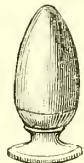


1/- & 1 1/2
Boxwood,
Skittle Shape,
6 1/2 and 7 9
per doz.



No. 17.—Quite New. Draughtsman Shape, Ebony and Boxwood alternate. The most pocketable shape in the market. 7 3 per dozen.

Nos. 11 & 14.



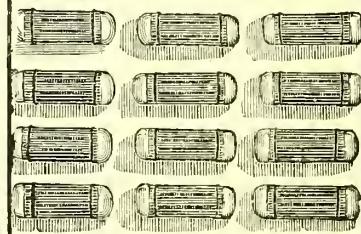
.6 and 1/- Boxwood, Pyramid Shape, each in a separate cardboard box, 4/- and 6/6 per doz.

Ditto, 12 in hinged outer, without separate cardboard boxes, 3 6 and 6 3 per doz.

No. 10.

MENTHOL A1 Brand.

6d. NEURALGIA & HEADACHE 6a.
PENCIL.



.6, 12 on a card, 3 6 per doz.

The A1 Brand is put up in 19 different forms, at prices to suit all classes of trade. These prices we do not constantly vary, but endeavour to take a fair average of the market price of Menthol, and on that basis to supply at as low a price as possible compatible with a good, reliable, and saleable article.

All shapes and sizes can be procured through any Wholesale House, or direct from

J. G. SHIRLEY, PROPRIETOR A1 BRAND MENTHOL,
30 PATERNOSTER SQUARE, LONDON, E.C.

Telegraphic Address—"MENTHOL LONDON."

Agencies undertaken for American Specialities and Novelties. Every facility afforded for their introduction.

Telephone Number,
1852.Advertisers' & Buyers' Reference List,
AND INDEX TO ADVERTISEMENTS.TELEGRAPHIC ADDRESS—
CHEMDRUG
LONDON.

ADVERTISEMENTS APPEARING IN THIS ISSUE OF "THE CHEMIST AND DRUGGIST."

Please note that to satisfy Post Office requirements the Advertisements are paged twice—once in Arabic, once in Roman numerals.

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richskell, & Apollinaris)
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ICE

Barnett and Foster

ICE

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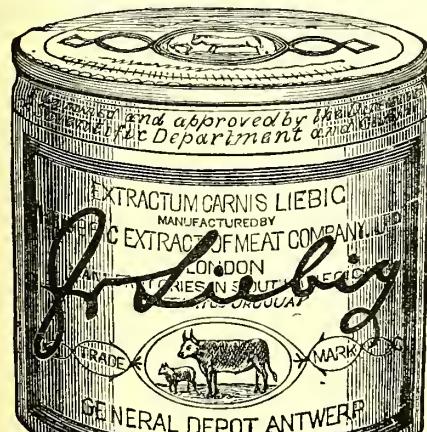
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A CERTAIN LARGE SALE—MOST LIBERAL ALLOWANCES TO AGENTS.

VOLUNTARY EVIDENCE OF LIVING AGENTS

Chemists—to each of whom direct reference is permitted.

NORTH.

ROTHERHAM, Jan. 2, 1886.
 Your Teas are giving great satisfaction in this district. The London Broken Tea is splendid value, and has won for itself a large consumption. It is only necessary to induce families to try these Teas to secure for them a permanent sale.

HUMPHREY DAVY.

CHESTERFIELD, Dec. 30, 1885.
 I tried several Tea Agencies in succession, and was dissatisfied with the result, as I failed in each case to establish an increasing demand. Early in 1879 I was induced to take your Teas, and the following is, I believe, a correct statement of the quantities I sold during the first five years:—1879, 979 lbs.; 1880, 3,243 lbs.; 1881, 4,398 lbs.; 1882, 4,755 lbs.; 1883, 6,367 lbs. I have had a steadily increasing demand from the first, and am convinced that your Teas are better value for money than any wrapped Teas offered.

ALFRED LOWE.

YORK, Jan. 7, 1886.
 Having been your Agent for some years, I think it only fair to say that the sale of your Teas and the satisfaction they have given to my numerous customers is highly gratifying; and, in my opinion, you place your Agents in a position that enables them to compete with anyone else in the Trade.

W. T. HEY.

SOUTH.

SALISBURY, Jun. 1, 1886.

Since I have had the Agency for your Teas, which is about five years, the sale has been steadily increasing. My customers speak in the highest terms of the Teas, and I find that when a trial has been made a regular customer is the result.

JOHN ROWE.

FOWEY, CORNWALL,

Jun. 1, 1886.

I have always found a ready sale for your Teas, and they are much appreciated by all my customers. I sell double the quantity I did at first.

J. WELLINGTON.

HERNE HILL, S.E.

Jun. 6, 1886.

I accepted the Agency for this district about twelve months ago, since which time the sale has gone on steadily increasing. Some of my customers say that the London 2/- Tea is quite equal to what they have been procuring from their grocer at 2/6, 2/8, and 3/-.

JOHN MORTIBOY.

EAST.

GREAT YARMOUTH, Dec. 31, 1885.

It is now above four years since I commenced to sell your "London Teas," and I must confess that when I ordered the first half chest I did not expect to sell it, but am now pleased to be able to say that it sold without difficulty, and created a demand that has ever since been increasing, and has far exceeded my most sanguine expectations.

W. SHEPPARD POLL.

GRIMSBY, Dec. 30, 1885.

I have been a retailer of packet teas thirty years, but was never able to give my customers such good value for their money before as I have been since I accepted your Agency, upwards of four years ago.

I have never had the slightest complaint respecting your Teas, but customers are constantly saying they are the best Teas to be had in the town.

ENOCH PALMER.

WOODERIDGE (Population 4,525).

Jan. 1, 1886.

Since my introducing your Teas in March, 1883, I have sold ten times more than before. The average sale for 1884 and 1885 has been 2,557 lbs. per annum. I am daily receiving gratifying testimonial's of the superior quality, blend, and flavour of the "London Teas."

EDWARD J. EATON.

WEST.

BANGOR, December, 1885.

The sale of the Tower Teas with us, considering we do not keep sugar or groceries, has realised our most sanguine expectations, as our last order, over half a ton, will go very soon.

Before your Agency we had tried two others, and failed to sell 28 lbs. in a month.

HAMILTON & JONES.

PEMBROKE, Dec. 31, 1885.

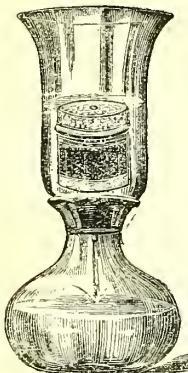
I have much pleasure in bearing testimony to the superior quality of the Teas I have received from you during the five years I have been Agent. The increased sales year by year will be sufficient guarantee of the public appreciation of it. I consider it wonderful value, and of a uniform quality and flavour. I sell twelve chests for every one I used to do in the old style. R. ORMOND.

BISHOP'S CASTLE, Jan. 2, 1886.

I have found the "London Teas" sell very well and please every class of customers. My sales in two years have increased between 600 and 700 per cent., and are still advancing—and, as you are aware, I now order from you every fortnight.

GEO. STRAWSON.

THE GREAT TOWER STREET TEA CO., LIM. L O N D O N .

CHEAP GLASS FILTERS.

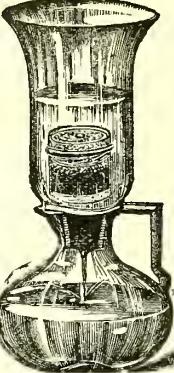
The ONLY Reliable Filters.

Made at OUR OWN Glass Works.
No Intermediate Profits.

STYLE "K"—Plain : 1 pint, 2/-
2 pints, 3/-; 3 pints, 4/- Engraved :
1 pint, 2/-; 2 pints, 4/-; 3 pints, 5/-.

STYLE "L"—Plain : 1 pint, 3/-
2 pints, 4/-; 3 pints, 5/- Engraved :
1 pint, 3/-; 2 pints, 5/-; 3 pints, 6/-.

STYLE "M"—Plain : 1 pint, 4/-
2 pints, 5/-; 3 pints, 6/- Engraved :
1 pint, 4/-; 2 pints, 6/-; 3 pints, 7/-.



Style "L."

Very LIBERAL Discount to the Trade.

Judson's GLASS WORKS,
ORMSIDE STREET,
OLD KENT ROAD, LONDON.

D. JUDSON & SON (LIM.),
SOUTHWARK STREET,
LONDON.



Style "M."

PERFECTION IN BUTTER COLOURING.

BUNSEN'S BUTTER COLOURING is Without Smell ! Without Taste !!
Does Not Colour the Milk !!! and is fully Double the Strength of the
best Danish or any other Butter Colour in the Market. In bottles, 6d., 1s.,
and 2s. 6d. each ; in tins, $\frac{1}{2}$ gallon, 1 gallon, and 2 gallons ; and in casks of
50 gallons. Prices on application to

BUNSEN, BENSON & CO.,
80 FANN STREET, BARBICAN, LONDON, E.C.

CONCENTRATED PATENT

PEPTONISED MILK

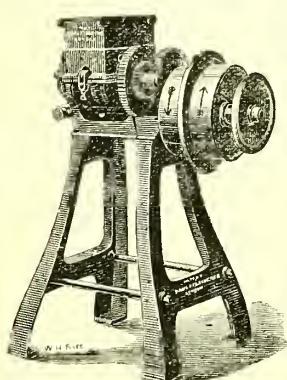
AND

PEPTONISED MILK AND COCOA.

These two preparations are made with pure rich PRE-DIGESTED Country Milk, and, by mere dilution with hot water, afford a delicious restorative beverage the assimilation of which requires no digestive effort.

SAVORY & MOORE, LONDON.

Tins, 1s. 6d. and 2s. 6d. Obtainable Everywhere.

**CHEMISTS' MACHINERY.**

PILL MASS KNEADING MACHINES.

PILL MAKING MACHINES.

DRUG GRINDING MACHINES.

SIFTING MACHINES.

FULL PARTICULARS OF ABOVE ON APPLICATION TO

WERNER & PFLEIDERER, 86 Upper Ground St., Blackfriars Bridge, LONDON, S.E.

EIGHT PRIZE MEDALS AWARDED.

**GOODALL'S
HOUSEHOLD SPECIALITIES.****Yorkshire Relish**

THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viands palatable, and the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s., and 2s. each.

CAUTION.—On each Yorkshire Relish Label is a Willow Pattern Plate and name, GOODALL, BACKHOUSE & CO. No other is genuine.

**Goodall's
Baking Powder**

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and beautiful light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

**Goodall's
Quinine Wine**

The best, cheapest, and most agreeable tonic yet introduced. The best remedy known for Indigestion, Loss of Appetite, General Debility, &c. Restores delicate individuals to health and vigour. In Bottles, 1s. and 2s. each.

**Goodall's
Custard Powder**

For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the utmost satisfaction if the instructions given are implicitly followed. Sold in boxes 2d., 6d., and 1s. each.

**Goodall's
Blanc Mange Powder**

Is acknowledged by all to be the most convenient and economical preparation ever introduced, as, by its use, a most Rich and Delicious Blancmange may be produced in a few minutes at a trifling cost, and may be had of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, and Vanilla. Sold in Packets, 6d. and 1s. each.

**Goodall's
Egg Powder**

Acknowledged to be the only real substitute for eggs yet discovered. Its action on Cakes, Puddings, &c., &c., resembles that of the egg in every particular, enriching them in colour and flavour, rendering them most wholesome and nutritious. One penny packet will go as far as four eggs; and one sixpenny tin as far as twenty. In 1d. Packets; 6d. and 1s. Tins.

SOLE MANUFACTURERS—

**GOODALL, BACKHOUSE & CO.,
WHITE HORSE STREET, LEEDS.**

A Monthly Price List of Druggists' Sundries, Patent Medicines, &c., can be had post free on application.

12½ gals. for £1, Cask free.
SPECIAL LINES FOR CASH BUYERS!!

**TYRER'S
WORCESTER SAUCE,
YORKSHIRE SAUCE,
"BOROUGH" KETCHUP.
BEST VALUE THAT MONEY CAN PURCHASE.**

Prices and Samples sent free of all cost by
PETER TYRER, The "Borough" Ketchup & Sauce Maker,
LONDON, S.E.

BAILEY'S MINTON-WARE BOWL DRUG MILL.

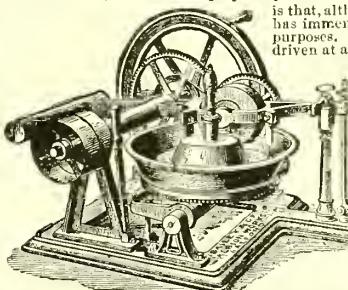
(CARR'S PATENT.) FOR HAND OR POWER.

Will reduce Crystals to an impalpable powder. The chief feature of this machine is that, although it can be turned with ease, it has immense frictional power for levigating purposes. This is caused by the runner being driven at a much greater speed than the bowl.

Diameter of Bowl, 18 inches.

Price, £11.

Lists, £c., on application.



W. H. BAILEY & CO., ALBION WORKS, Salford, MANCHESTER.

MUSTARD.

**FINCH, RICKMAN & CO.'S
Genuine Qualities**

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

**6 BROKEN WHARF, UPPER THAMES STREET.
LONDON.**

**GEO. MASON & CO.'S
SPECIALTIES FOR INVALIDS,
ESSENCE OF BEEF,**

**CONCENTRATED BEEF TEA,
MEAT LOZENGES, &c.**

As Supplied to the leading London Hospitals.



A Trial of our Preparations will at once prove their superiority over all others, added to which they are the cheapest.

PRICE LIST POST FREE.

417 KING'S ROAD, CHELSEA, LONDON, S.W.

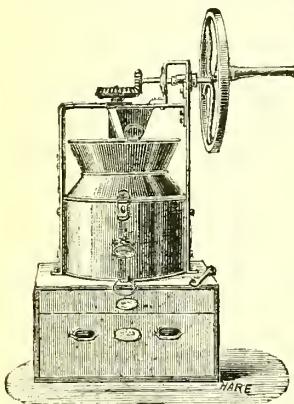
NOTICE TO CHEMISTS AND MANUFACTURERS.

DESIDERATUM MIXER

BRACHER'S PATENT

A REAL TIME, LABOUR, AND MONEY SAVER.

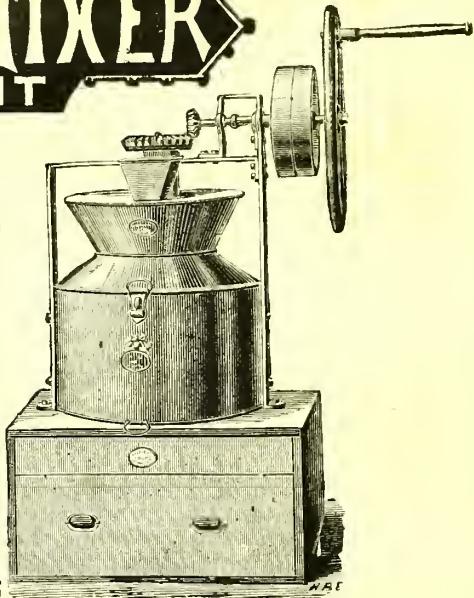
These Machines are admirably adapted for mixing all kinds of powders, heavy or light, in the shortest possible time, thereby superseding to a great extent the use of the pestle and mortar, supplying a long-felt want amongst Chemists and Druggists, Grocers, Confectioners, Drysalters, Colour Merchants, and Manufacturers.



CALCUTTA INTERNATIONAL EXHIBITION.



GOLD MEDAL.



UNSOLICITED TESTIMONIAL IN FAVOUR OF THE "DESIDERATUM" MIXER (BRACHER'S PATENT).

From CHARLES GOLDSHAW, Agricultural Chemist, &c., 24 Oxford Street, Bilston, November 27, 1885.
GENTLEMEN.—If my opinion is worth anything to you, I am pleased to append the following:—After having used one of your 28-lb. size "Desideratum" Mixers some two or three years, and wanting a larger one, I took considerable trouble in ascertaining if I could find a mixer which would do the work more effectually; but I must candidly admit that, after most careful and exacting comparisons on all points, I give yours the preference; hence the present order for a 2½-cwt. size.

Messrs. P. H. BRACHER & CO.

Yours, &c.,
C. GOLDSHAW.

Send for Illustrated Price List and full particulars, Post Free.

BRACHER & CO., WINCANTON AND YEOVIL, SOMERSET.

** All Communications to be addressed to Wincanton.

TO THE CHEMISTS & DRUGGISTS OF THE UNITED KINGDOM.

St. George's Middle Street, Norwich.

The Excise have informed some of our customers that it is necessary to have a Wine License to sell our Liebig's Extract of Meat and Malt Wine; we hold the opinion, in common with many of the large Wholesale Firms, that a Patent Medicine License is all that is required. If, however, any Chemist would like to hold a Retail Wine License, we are willing to pay the entire cost, if they will send an assorted order, to hand to their Wholesale House, for the following Wines, say:

3 doz. 2/9 Liebig's Extract of Meat and Malt Wine, at 24/6 per doz.

1½ "	4/6	"	"	"	at 38/-	"
-------------	------------	----------	----------	----------	----------------	----------

3 "	Crown Imperial	Invalid Port Wine	at 28/-	"
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3 "	"	"	"	Sherry	at 28/-	"
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This License will enable the holder to sell any kind of Wines. If it is preferred to make the order for all Liebig's Extract of Meat and Malt Wine, we have no objection to this, but a ready sale will be found for the Port and Sherry, the quality of which is very fine. We have gone to a considerable expense in bringing the Liebig's Extract of Meat and Malt Wine before the public, and upwards of a Thousand Medical Men are now daily prescribing it.

Yours most obediently,

COLEMAN & CO.

EVANS' SALINE. EFFERVESING.

This preparation is a mixture, in definite proportions, of Howard's Chlorate of Potash, English Tartaric Acid, Bicarbonate of Soda, and a little Cane Sugar. The proportion of these ingredients is fixed, and always remains the same. This, and the pleasant excess of acid, characterises Evans' Saline. A dry mobile powder, dissolving perfectly.

Bottles with Chemists' own name, or in bulk.

Eight new artistic designs for wrappers for the season.

For further particulars as to price, &c., see Price List.

EVANS, SONS & CO.,
56 Hanover Street,
LIVERPOOL.

EVANS, LESCHER & WEBB,
60 Bartholomew Close,
LONDON.
PARIS and MONTREAL.

[1]

W. KEMP & SON, HORNCastle.

DEAR SIR,

We direct attention to the exceedingly fine quality of our No. 1 BEST LIGHT CRUSHED LINSEED, containing all the Oil.

It is crushed from a special growth of Linseed, which being extremely fine and bold, and at the same time having an exceedingly thin skin, gives when crushed a very large proportion of Meal to Husk.

We guarantee it to be strictly Pure, and cannot be too emphatic in stating this. All particles of dirt, grit, foreign seeds, &c., are carefully removed, and our increasing sales show that our care in this respect is appreciated. Nothing better can be obtained.

It is lightly crushed, and will keep far longer than when heavily crushed and bruised, as in this case, the Oil being partially pressed out, the sample is darker, and will not keep so well. Applications for samples invited. Always esteeming your orders,

W. KEMP & SON.

No. 1.—BEST LIGHT CRUSHED LINSEED, containing all the Oil, guaranteed strictly pure. 18/6 per cwt. Bag free.

LONDON AGENTS—

MESSRS. BARCLAY & SONS, 95 Farringdon Street,
*Who hold Stock and supply 1 cwt. at above price,
and smaller lots at 20/- per cwt.*

Special Quotations for quantity. Ordinary Crushed Linseed at lowest market prices. Samples free.

BISHOP'S GRANULAR EFFERVESCENT SALTS.

ESTABLISHED 1857.

THE LANCET, writing of Bishop's Preparations, says:—"Their excellence is well known." The BRITISH MEDICAL JOURNAL says:—"The name of Mr. Bishop is a sufficient guarantee that the article is skilfully prepared."

Bishop's Granular Effervescent Citrate of Caffeine.

The Best Known Remedy for Headache. Sold in Bottles at 2s. 6d. each.

Bishop's Granular Effervescent Citrate of Potash.

Contains eight grains of this anti-febrile salt in each drachm.

Bishop's Granular Effervescent Mineral Water Salts.

Among the Mineral Water Salts thus prepared may be named, CARLSBAD, KISSINGEN PTZNA, SELTZER, VICHY, LITHIA, FRIEDRICHSHALL, &c., &c. In each case a teaspoonful of the Salt in half a tumbler of water will produce a draught similar in effect to the natural water.

Bishop's Granular Effervescent Citrate of Magnesia.

A perfectly white and delicately clean preparation, prepared from Salts obtained from the Pure Fruit Juices of Lemons and Grapes. The best Chemists in Great Britain and the Colonies kept no other "Granular Effervescent Citrate of Magnesia" than "Bishop's."

Report on Mr. Bishop's Granular Effervescent Preparations. By Prof. Attfield, Ph.D., F.C.S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, Author of a Manual on General Medical and Pharmaceutical Chemistry.

Mr. Bishop's Granular Effervescent Preparations have been known to me for more than twenty years. The maker has submitted to me the formulæ for them; I have seen them compounded at his factory; I have more than once tested the materials he uses; I have many times analysed the finished products. The formulæ are excellent, the ingredients pure, the processes perfect, the products all that can be desired.

(Signed)
London, December 6, 1881.

JOHN ATTFIELD.

Observe the name on the Seal, the Registered Trade Mark on the Label, and full address of
ALFRED BISHOP, Manufacturing Chymist, 17 SPECK'S FIELDS, MILE END NEW TOWN, LONDON.

Messrs. JOHN WYETH & BROTHER are Sole Agents in the United States for Mr. Bishop's Preparations, and keep Stock of all the above Products.

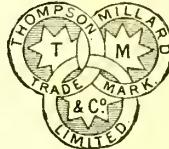
THOMPSON, MILLARD & CO.



LIMITED,

CURTAIN ROAD, LONDON, E.C.

Telegraphic Address, "BEATROP LONDON."

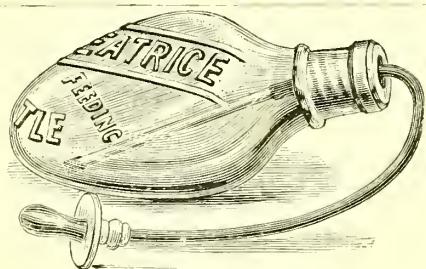


WHOLESALE & EXPORT

**DRUGGISTS' SUNDRIESMEN,
DRUGGISTS,
SURGICAL INSTRUMENT MAKERS, PERFUMERS, ETC.**

Sole Proprietors of the "Mater," "Bristol," "Imperial,"

**BEATRICE AND TROPICAL
FEEDING BOTTLES.**



THE "BEATRICE" FEEDING BOTTLE.

With opal glass screw stopper, best black rubber fittings, each in handsome shouldered box arranged to stand the feeder in while filling, and tube and bottle brush, per dozen 8s., subject to usual discount. This Feeder combines the advantages of the straight and bent neck bottles, can be laid on either side without leakage, and is easily cleaned.



THE "TROPICAL" FEEDING BOTTLE.

THOMPSON, MILLARD & CO.'s new PATENTED Boat-shape Feeding Bottle. Fitted with screw glass stopper or metal screw cap at end to allow of cleaning. In two sizes. Illustrated Price List on Application.

Special attention paid to Export Orders, and Illustrated Price Lists posted free to any part of the world on application.

Our goods give universal satisfaction, and buyers may with confidence favour us with a Trial Order.

THOMPSON, MILLARD & CO., LTD., LONDON.

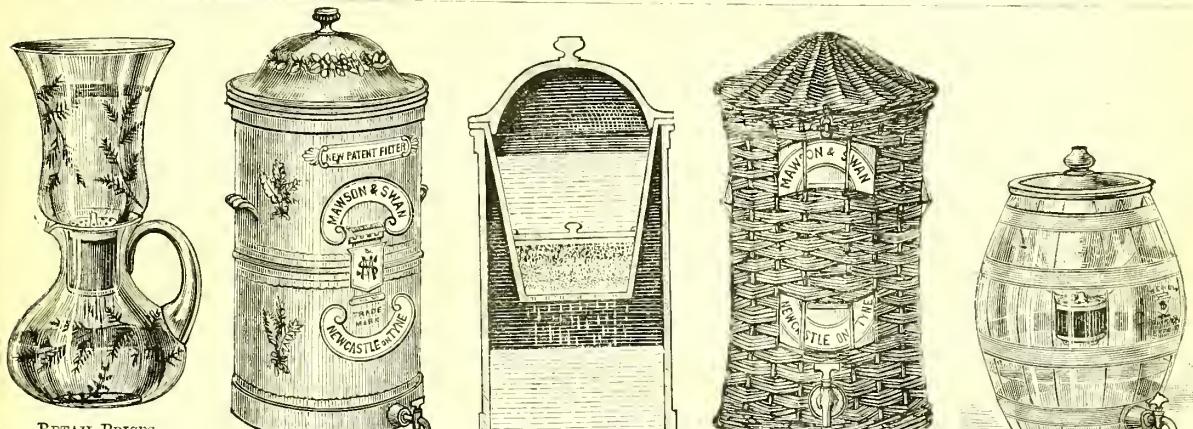
MAWSON & SWAN'S NEW FILTERS

FOR REMOVING THE PRINCIPAL DELETERIOUS

IMPURITIES OF WATER,

Lead, Lime in excess, Sewage, Poisonous Gases, Germs of Cholera, and Typhoid Fever.

SEE ANALYTICAL REPORT.



RETAIL PRICES—

Plain 4/6, with handle 5/6.
Engraved 6/6, do. 7/6Sizes 1 2 3 4 6 Gall.
Prices 14/6 21/- 27/- 35/- 50/- each.Wicker covered, each
7/6 extra.Glass Barrel,
15/-

With each of the Glass Filters sufficient Medium is given, free, for re-charging about six times.

MAWSON & SWAN, 20 WEST GRAINGER ST., NEWCASTLE-ON-TYNE.

WHOLESALE AGENTS—LONDON: Messrs. S. Maw, Son & Thompson; Messrs. Bentley & Sons; Messrs. Bourne, Johnson & Latimer; Mr. William Toogood; Messrs. Lynch & Co. MANCHESTER: Messrs. Woolley, Sons & Co. LIVERPOOL: Messrs. J. H. & S. Johnson; Messrs. Symes & Co.; Messrs. Evans, Sons & Co. BIRMINGHAM: Messrs. Churchill & Sons; Messrs. Salt & Son. EDINBURGH: Messrs. Duncan, Flockhart & Co.; Rainies & Co. GLASGOW: Glasgow Apothecaries' Co. BELFAST: Messrs. Grattan & Co. CORK: Goulding & Co., Lim. BOMBAY: Kemp & Co., Lim. CALCUTTA: Smith, Stanistreet & Co. NEW ZEALAND: Kempthorne, Prosser & Co., Wellington, Dunedin, Christchurch, and Auckland.

BARBER'S ORIGINAL CRIMSON INK

FOR MARKING LINEN,

WHICH IS CHANGED BY HEAT TO A JET BLACK.

Put up for Retail Sale in 6d., 1/, 2/, 2/6, and 5/ Bottles.



Also BARBER'S

CONCENTRATED LIQUID COCHINEAL,

FOR COLOURING JELLIES, CUSTARDS, &c.

PUT UP IN 6D. AND 1/ BOTTLES.

MANUFACTURED ONLY BY THE PROPRIETORS—

G. BARBER & CO.,

6 Worcester Drive, Club Moor, LIVERPOOL.

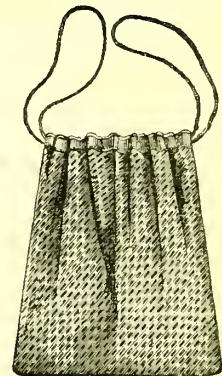
Can be obtained through any of the Wholesale Firms, or from the Proprietors,

G. BARBER & CO., CLUB MOOR, LIVERPOOL.

S. MAW, SON & THOMPSON'S Bath Gloves, Rubbers, &c.

	Gloves. (Pairs.)	Straps.	Pads.	Gloves. (Pairs.)	Straps.	Pads.
CALEFACIO OR BADEN, No. 1, soft Brown . . per doz.	6/4	10/8	6/0	HONEYCOMB, White. per doz.	5/4	10/8
CALEFACIO OR BADEN, No. 2, hard Brown . . per doz.	6/4	10/8	6/0	REVERSIBLE, No. 1, one side soft Brown, the other best White Turkish . . per doz.	7/0	12/0
CALEFACIO OR BADEN, No. 3, soft Brown, assorted patterns, per doz.	6/8	11/4	6/0	REVERSIBLE, No. 2, one side hard Brown, the other White Honeycomb . . per doz.	7/0	12/0
CALEFACIO OR BADEN, as- sorted patterns, export quality, per doz.	4/0		(Red labels)	REVERSIBLE, No. 3, one side Egyptian Loofah, the other best White Turkish, per doz., single	8/0	—
CALEFACIO (the U.S.), Striped soft Brown . . per doz.	6/8	11/4	6/0		—	—
TURKISH GLOVES, per doz. pairs,	3/- & 4/-			PADS, per doz.	4/-	
Ditto BEST QUALITY , ,	5/-			, ,	5/6	

S. MAW, SON & THOMPSON'S WATERPROOF CHECK SPONGE BAGS.



No.	1	2	3	4	5	6	
	7×6	8×7	9×8	10×9	11×10	12×11	inches.
Best Quality	6/0	7/0	9/0	11/0	12/6	16/0	per dozen.
Second ditto	4/6	5/3	6/6	8/0	9/3	11/6	,

For other descriptions, see Quarterly Price Current, page 101.

S. MAW, SON & THOMPSON'S BRIGHTON SPONGE BAGS,



WITH BALL CLASP FASTENINGS, NICKEL-PLATED.

No.	2	3	4	5	6	
	8×7	9×8	10×9	11×10	12×11	inches.
CHECK...	... 16/0	18/0	20/0	26/0	28/0	per dozen.
PAISLEY ...	18/0	20/0	22/0	28/0	32/0	,

THE BRIGHTON
SPONGE BAG.

S. MAW, SON & THOMPSON, LONDON.

FORD, SHAPLAND & CO.

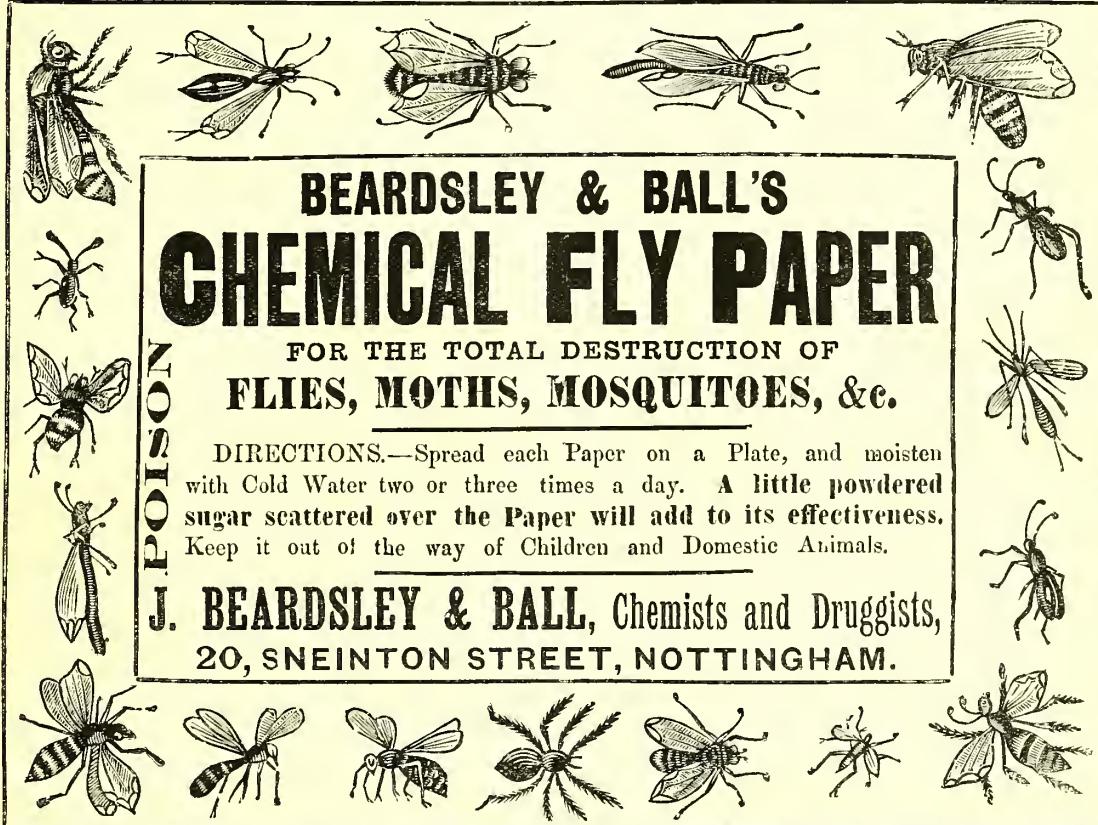
MEDICAL LABEL AND GENERAL PRINTERS, ENGRAVERS, &c.,
6 Great Turnstile, High Holborn, LONDON, W.C.

CHEMISTS' FLY PAPERS,

Chemically prepared and guaranteed to be thoroughly effectual; printed with own name and address and advertisements on the four sides. Specimens and Prices on application.

BEARDSLEY'S INSECT POWDER,
FOR THE INSTANTANEOUS DESTRUCTION OF INSECTS.
1d., 2d., 3d. and 6d. Packets.

Fac-simile of Fly Paper as printed with name and address.



Fac-simile of Fly Paper as printed with name and address.

CHEMISTS' COUNTER BILLS,

ON GOOD PAPER, AT LOWEST PRICES EVER OFFERED.

10,000	CROWN 8vo. BILLS (7½ in. x 5 in.)	12s. 6d.
10,000	DEMY 8vo. BILLS (9 in. x 5½ in.)	18s.

ALL OTHER SIZES AT EQUIALLY LOW RATES. SAMPLES AND PRICES ON APPLICATION.

LABELS of every description. **SLIP LABELS**, 10,000 (10 kinds) **1s.** per 1,000.

PRICE LISTS, Pamphlets, Circulars, Billheads, Memorandums, Cards, and all kinds of Printing and Stationery required by Chemists at most Moderate Prices. **STOCK SHOW CARDS**, Gold on Black, Gilt Bevelled Edges, size 10 in. x 6½ in., for various specialties; Samples 9d. each, post free.

Sole Agents for CHARLES RICHARD'S PATENT PERFECT TUBE CLEANER FOR INFANTS' BOTTLE-TUBES. 6s. 6d. per gross; Carded, 8s. per gross.

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POST-CARD COMPETITION.

No. 2.

JUDGING from the number of post-cards received and the nature of the guesses, our second subject for competition seems to have been a harder nut to crack than the first. It will be remembered that in the first competition we received 619 replies, and those, on the whole, showed that the competitors were fairly alive to what are and what are not the most used medicines. In this competition, however, there have not only been fewer competitors, viz. 244, but 52 of these have not quite grasped what was required of them. A few sent us only half a dozen names, and the majority of that number sent only the names of those whom they considered to be the winning fourteen. What we required was the whole twenty-one names arranged as competitors considered they would stand in the result. The nature of the guesses may be judged from the fact that only one out of the 172 cards enumerated gave a correct return, that is, named the whole of the successful candidates. Twelve named thirteen of the successful men, the fourteenth name being either that of Mr. Squire or Mr. Young, and the same names were stumbling-blocks to those who named twelve out of the fourteen. Between fifty and sixty were found in this class, and the same number amongst those who named 11 only. Principals as well as assistants have entered the competition, and one correspondent from Asia Minor sent his guess in due course. The name of the prize winner is W. Smith, assistant to Messrs. Palk & Smith, Torquay.

The following is the order given by Mr. Smith:

- 1. Greenish
- 2. Symes
- 3. Schacht
- 4. Savage
- 5. Bottle
- 6. Williams
- 7. Gostling
- 8. Radley
- 9. Allen
- 10. Baildon
- 11. Woolley
- 12. Southall
- 13. Borland
- 14. Cross

- 15. Harrison
- 16. Maltby
- 17. Squire
- 18. Young
- 19. Mackenzie
- 20. Spink
- 21. Lance

The names of those who closely followed the prize-winner are: J. H. Blyton (Manchester), Borthwick (Thurso), Thomas Bloodworth (Peterborough), Sydney Count (King's Lynn), W. J. Dalby (Hastings), R. H. Field (Birmingham), Oswald Gatwan (Hitchin), F. Parkes (Barnet), T. Scholay (Bromley), William Sharp (York), J. Tiffany (Ilkley), Elmund Winzer (Plymouth).

* *

Mr. Joseph Bosisto has been requested to deliver a lecture at the Colindian Exhibition during the summer, and he has consented to do so. The subject will be Australian Vegetation.

* *

There is some real prospect of a Commercial or Colonial Museum being established in London. The matter has been talked of for several months, but so far only in a semi-business way. Now, however, it is understood that the Prince of Wales has expressed the hope that such a museum should be founded, and this has given a fresh impetus to the initiators of the Commercial Museum. Last week a requisition was numerously signed on Change, which is to be submitted to the Chamber of Commerce, and if the Chamber take the matter up the scheme will undoubtedly go on to a successful issue.

* *

DIARY FOR NEXT WEEK.

Monday, May 31.—London Institution, at 5 p.m. Professor Henslow's second lecture on "Seeds, Flowers, and Roots."

Public Sales of Cinnamon at Commercial Sale Rooms, at 11 o'clock.

Tuesday, June 1.—Royal Institution, at 3 p.m. Professor Arthur Gangee on "The Function of Circulation."

Public Sales of Cinchona bark at 6 Mincing Lane, at 1 o'clock.

Drysalteries at Commercial Sale Rooms, at 1 o'clock.

Wednesday, June 2.—Pharmaceutical Society. Council meeting at 11 A.M.

Public Sales of Spices at Commercial Sale Rooms, at 1 o'clock.

Thursday, June 3.—Royal Institution, at 3. Professor A. Macalister on "Habit as a Factor in Human Morphology."

Public Sales of Gums at Commercial Sale Rooms, at 11:30 o'clock.

Thirty-first annual festival of members of the staff of the East and West India Dock Company, in aid of the Poplar Hospital, at the Holborn Restaurant. Sir Thomas Brassey, M.P., to take the chair at 6:30 p.m.

The Chemical Society, Burlington House, Piccadilly, at 3 p.m. "A Study of the Urethane Reaction," by Samuel E. Phillips, F.C.S.

Second lecture on "Galenic Pharmacy," by Emeritus Professor Redwood, in the Lecture Theatre, 17 Bloomsbury Square, at 4 p.m.

Friday, June 4.—London Homoeopathic Hospital, Great Ormond Street, Bloomsbury. Conversazione and bazaar, at 2.

Saturday, June 5.—Royal Institution, at 3 p.m. Professor G. G. Stokes on "Light, with special reference to effects resulting from its action on various substances."

London Homoeopathic Hospital. Conversazione and bazaar at 2.

* *

Society of Chemical Industry (London section).—We are requested to state that Dr. Meymott Tidy's paper on the "Chemical Treatment of Sewage" has been postponed until June 8.

Metropolitan Reports.

THE MYSTERIOUS POISON.

ON Thursday the adjourned inquiry respecting the death of Katherine M. Huntley was resumed at Hackney before Mr. George Collier, Deputy-Coroner for East Middlesex. It has already been reported (*CHEMIST AND DRUGGIST*, May 15) that this case was adjourned, to allow Dr. Tidy to complete his examination of a substance which had not previously been found in the human stomach, and in consequence of this statement the conclusion of the case has been looked forward to with considerable interest. On Thursday, after evidence had been adduced to show that the deceased had cohabited with her employer, and that person had stated that she had purchased a packet of Keating's insect powder, Dr. Meymott Tidy was called, and stated that he had made an analysis of the contents of the stomach and matters which were received by him on April 22. He received a variety of small bottles, altogether four in number, and a syringe. The bottles contained nothing but what was harmless. He was convinced that nothing was being used of a poisonous nature in the syringe, which was of a form used for self-injection. He had an 8-oz. bottle of mixture, which was quite full, and contained matters which were harmless. A bottle containing olive-oil and an empty tin were likewise given him. He took the stomach out of the jar and opened it. There were signs of inflammation in the stomach, not uniformly spread over it, but in dark lines and patches. The contents were faintly acid, but not of greater acidity than would be found under the normal process of digestion. He heated the contents of the stomach with a quantity of alcohol, and this and the soluble portions were examined for poisons, but he found none. The solid materials in the stomach contained something which had a vegetable structure. The alcoholic extract also had a special yellow colour. The solid material in the stomach exactly coincided with the extracts from Keating's insect powder, as did also the alcoholic extracts. He was further of opinion that a large dose of Keating's insect powder had been taken, but he was not prepared to say in what quantity. He was also of opinion that the powder had been taken within a comparatively short time before death. He made a number of experiments with Keating's insect powder, and he believed its composition was entirely vegetable. He had made a series of experiments on animals. Rabbits took it, and no harm seemed to come of it, but it was a difficult thing to draw a conclusion as to the action of poisons on rabbits. It had been tried on a dog, but it was found impracticable to give it to the animal. That was as far as he had taken the case. He found that the deceased had taken Keating's insect powder, and that it had been taken a short time before death.

In answer to the Coroner, he could only say that Keating's powder had not poisoned a rabbit or a dog. So far as he had gone he had no evidence of it being poisonous. The drug bitter aloes was somewhat similar to Keating's powder. He had no evidence that the stomach contained anything that could poison a human being, or that death had resulted from poisoning. Mr. Keating had given them every assistance in his power.

The Coroner said that was so. He also pointed out that there was nothing about the body to show the cause of death, except that it was syncope or sudden failure of the heart's action. Such a heart as the deceased had might bring about death at any time, or from any sudden fright or shock. They had also heard that the features were composed.

The jury returned an open verdict, without comment.

Obituary.

BRAY.—On May 8, Mr. William Bray, at 67 St. John Street, E.C., aged 53, for many years assistant at the General Apothecaries' Company.

ELLITHORNE.—On May 10, Mr. Wm. Cooper Ellithorne, chemist and druggist, Liverpool, aged 50.

Provincial Reports.

BRIGHTON.

THE MINERAL WATER TRADE.—At a meeting at the Town Hall, Brighton, on Thursday, May 20, of several of the leading mineral water manufacturers in the town, it was decided to form a "Sussex Mineral Water Bottle Exchange and Trade Protection Society, Limited." The meeting was convened by circular, in which eighteen reasons for joining such a society were given, setting forth that the association would be able to protect and further the interests of its members in a variety of directions. Messrs. Horsley, W. W. Savage, Shelvey, and Burroughs were appointed as a committee to carry out the resolution and to prepare the rules.—*Brighton Herald.*

LIVERPOOL.

A RIVAL TO THE BRÜNNER-MOND COMPANY.—A powerful company has just been formed to work patented processes, whereby the respective weak points of the Le Blanc and of the Solvay methods are most ingeniously made to neutralise each other, thus:—

(1) In the Le Blanc process the sulphur is entirely lost, in combination with lime, and forms a waste product of the most troublesome character.

(2) In the Solvay process the chlorine is entirely lost, and this is the weak spot in it which has enabled the Le Blanc makers to hold on so long.

(3) In the new combined process the hitherto lost sulphur of the Le Blanc process is recovered by means of the chlorine of the Solvay process, the cost of the lime for the latter is saved, the residual "alkali waste" is reduced to almost half, and rendered quite innocuous.

Seeing that the fortunate original shareholders of the Brünnner-Mond Company receive 40 per cent. dividends, those who are in the new concern should feather their nests well, whilst they have the satisfaction of giving a greatly needed fillip to a staple trade, and changing the face of the country round Widnes and St. Helens, where, when the heaps of decomposing waste no longer poison earth and air alike, we may hope again to see

"The flowers that bloom in the spring, tra, la."

"**A LITTLE KNOWLEDGE,**" &c.—An evening paper here, which prides itself upon being a quarter of an hour ahead of the times, has been instructing us how to ripen our whisky. (The idea of druggists having any money to buy whisky!) The happy thought is that spirits may be ripened by electricity. Three incandescent lamps of thirty-two candle-power are to be inserted in a barrel of whisky, with the result of producing the same effect on the spirit as the ripening of age. *Ex luce lucellum.*

"**TOOK HIM IN AND —.**"—Mr. C. S. Samuell, the deputy city coroner, held an inquest the other day respecting the death of a county court bailiff who died suddenly in the workhouse hospital. Whilst spending a quiet and happy time "in possession" of an old-established chemist's shop in Islington it was alleged that he got two bottles of medicine, but the deceased said that these did him more harm than good! He, however, got tipsy, was superseded, and died in the hospital. Death having been ascertained to be caused by the effects of alcohol, accelerated by congestion of the lungs, a verdict of "natural causes" was returned, doubtless to his late host's relief.

WELL DONE, CHARLES SYMES!—At the head of the poll—and handsomely too—you are returned to the Council of the Pharmaceutical Society for another term for the good common-sense work you do so well and so pleasantly. By the way, could you not, when grants to provincial societies are flying about up yonder, manage to divert in this direction enough of the golden stream to enable our Chemists' Association to purchase for its library a "Cooley's Cyclopaedia" of rather later date than the black-letter edition which is now their sole pride?

MANCHESTER.

A CHEMIST PRACTISING AS A DOCTOR.—The deputy city coroner, Mr. S. Smelt, held an inquiry on Tuesday last into the circumstances attending the death of

James Wood, a grocer, 34 years of age, lately carrying on business at 163 Rochdale Road, Harpurhey, who had died suddenly from loss of blood on the 22nd inst.

Mrs. Anne Wood, the deceased's wife, stated that her husband had been ailing for six months past. Three weeks ago he became worse, and commenced bleeding from the nose and mouth. He suffered very much from toothache or neuralgia, and he had a tooth taken out, but this only made the bleeding worse. She then went to a Mr. Jackson, a chemist, and obtained from him two bottles of medicine, and after the deceased had taken these the bleeding stopped. It began again a day or two afterwards, and Mr. Jackson was called in to see the deceased. He attended the deceased until a week ago, when witness suggested that further medical advice should be obtained, and Mr. Jackson brought Dr. R. H. Quine, of 90 Broughton Road, Pendleton. Dr. Quine examined the deceased, and took steps to stop the bleeding. It began to bleed again the same night, however, and Mr. Jackson again came to see him. Dr. Wilkinson was called in by a neighbour, but the deceased gradually sank, and died early on Saturday morning. Mr. Jackson had attended her child when it suffered from convulsions. She never paid him for the visits, but she obtained a bottle of medicine from him every time he paid a visit.

Mr. J. Jackson, medical and dispensing chemist, said he had got his qualification by practising before the Act was passed. He had not qualified by passing any examination, nor had he any surgical or medical qualification. He knew he had no right to practise as a surgeon. He was called in to see the deceased first on May 3. He then gave him some medicine for the neuralgic pains, and tried to stop the bleeding. He considered the case was a serious one, and he advised the person who called him in to obtain better medical advice, but she told him they were quite satisfied with him and his treatment. Afterwards Mrs. Wood said she wished to see if something could not be done to prevent the bleeding coming on again. She asked witness if any of the medical men in the neighbourhood would consult with him about the case, and he replied that he did not think they would after the last "unpleasantness." She then said she would leave it to him to call in any one he thought proper, and he called in Dr. Quine, and he and Dr. Quine saw deceased together. He knew that Dr. Quine had only recently come to Manchester. He did not know that no physician of any standing in Manchester would attend a consultation with him, and in fact several doctors in Manchester had been in consultation with him about patients he had attended. He did know that no physician of any eminence would consult with him now, but that was owing to the "unpleasantness" that attended the last inquest.

Mr. Smelt: Have you not several times been censured by coroner's juries?

Witness: Decidedly not. It has been in the papers that way, but it is not so.

Mr. Smelt: Do you mean to say that you have never been censured?

Witness: Certainly not. It has appeared in the papers several times that I have been censured, but I have not been censured—I have been cautioned.

Mr. Smelt: Have you been cautioned several times?

Witness: The way I have been cautioned is this. Mr. Herford once told me that I had better be careful, as I had nine-tenths of the medical men against me.

Has Mr. Price cautioned you?—Yes, he has cautioned me; but the jury did not.

Has Mr. Herford cautioned you?—Yes.

Have I cautioned you?—Yes, you have.

Have any other coroners cautioned you?—No.

Inquests have been held on several patients treated by you who have died?—Yes.

And that is the reason you say that medical men won't meet you now, because you have been cautioned by three coroners?—I am not saying whether that is the sole cause, or whether it is petty jealousy arising from some medical men.

Well, you don't suppose that petty jealousy would cause coroners to hold inquests and to caution you?—Well, I have got good reason for saying so, or I should not have said it. A gentleman offered to assist me after the last inquest, and he afterwards refused, and I know the reason why he refused.

Dr. J. B. Wilkinson, practising in partnership with Dr.

Armstrong at Harpurhey, said he first saw the deceased on Thursday last. His partner had seen the deceased on the previous night, and had prescribed for him, and witness ordered the medicine to be continued. Deceased was suffering from weakness caused by loss of blood, and died from exhaustion on Saturday morning. Witness had heard the prescription given by Mr. Jackson, and he did not think the medicine would have the slightest effect on the bleeding. The disease from which the deceased was really suffering was haemorrhagic diathesis. It was a very serious disease, and one that was exceedingly difficult to treat. If the deceased had been properly treated in the first instance and the bleeding had been stopped, he would very probably have still been alive.

Dr. T. Harris, pathological registrar at the Royal Infirmary, said he had made a post-mortem examination of the body of the deceased. There were evidences that the deceased had lost a very large quantity of blood, and there was only a very small quantity of blood in circulation. The cause of death was haemorrhage, both internal and external. He had no doubt that haemorrhage was the result of disease. The prescription given by Mr. Jackson would have absolutely no effect on the bleeding. Sometimes the bleeding stopped without any treatment at all, owing to the nostril becoming plugged, but when that plugging was removed or broken down, the bleeding recommenced.

Mr. Smelt said this was all the evidence he proposed to place before the jury. The question for them to consider was whether this man's death had been hastened in consequence of neglect or malpractice. If they thought Mr. Jackson led these people to believe that he thoroughly understood what was the matter with the deceased, and that in consequence of his ignorance in not understanding it the deceased died earlier than he otherwise would have done, then they must consider whether or not Mr. Jackson was to blame for the death, and whether he ought not to be sent for trial on a charge of manslaughter. They had to consider that Mr. Jackson actually treated the deceased for a fortnight, and treated him in such a manner, according to the medical evidence that had been given, as to do him neither good nor harm. The deceased and his wife apparently had every confidence in Mr. Jackson, and Mr. Jackson allowed them to have every confidence, and let them think he knew what was the matter with the deceased. When he suggested that some one else should be called in they told him they believed he could do all that was right, and even then he did not tell them he did not know what disease the deceased was suffering from. What they would have to ask themselves was whether Mr. Jackson, by professing to know what was the matter with the deceased, had not really delayed him from obtaining proper medical advice. If they thought that the deceased would probably have been alive now had he had proper medical advice at an earlier stage, then they would have to say how much blame attached to Mr. Jackson for not calling in proper medical advice earlier.

After consulting together for a few minutes, the jury returned a verdict to the effect that Wood had died from natural causes, but recommended that the chemist should be censured for not advising the deceased's relatives of his danger at an earlier stage.

Mr. Smelt, addressing Mr. Jackson, said the last time he held an inquest in which he (Mr. Jackson) was concerned the jury did censure him. He remembered on that occasion saying that he (Mr. Jackson) belonged to an honourable profession, and that if he would stick to the profession there was no reason at all why he should not be a responsible and a decent member of society, but if he would go beyond that profession, and practise in a manner in which he had been practising, he would very soon get into mischief. It was at the request of the jury that he was then censured.

Mr. Jackson: I was not aware of it. It has escaped my memory if I was. I should certainly stick to anything that has been said, and I certainly should not wish to shirk anything.

Mr. Smelt said it was a very serious matter for a man in Mr. Jackson's position to be censured by a jury of his fellow-townsmen. He seemed to look upon it lightly, but it was no light matter. He appeared to have been grossly negligent, and he (Mr. Smelt) quite agreed with the jury that he ought to be severely censured. Mrs. Wood had lost her husband, and very possibly the deceased might have

been alive, nor if he, Mr. Jackson, had done his duty. He was only a boy to see that he was using this censor in such a disreputable manner.

Mr. Jackson: You are labouring under a misapprehension. I didn't know. I think more than you do.

—Inquiry then ended.

SCOTLAND.

MURDER AT A CHEMIST.—A fearful crime was committed in the main street of Poole on Friday last, May 11, at about 11 a.m. Mr. H. Hamblin, chemist, High Street, fell the victim. Mr. Hamblin, who was one of the aldermen of the town, and also a sub-commissioner of police, had been attending a Court of Quarter Sessions, and was returning home, when he was accosted by a man named John G. King, aged about 26 years. This man said he had been drinking, and had been stigmatized in the "Standard" instead of one of the other papers. After a brief conversation King struck him, drew a revolver from his pocket and began firing. King then ran away, but was soon captured. He was found lying on the ground, all of which penetrated his body. The bullet struck him in the chest. While there were also wounds inflicted one ear on the back of the head, and on the face. King, though a resistance slightly gave up, surrendered, and walked calmly across the road to the police-station, where he was locked up in a cell. Mr. Hamblin was carried to the police station as speedily as possible, and medical assistance was at once procured, but he died about an hour after being shot. Prisoner, whose family history is unknown, has admitted purchase of the revolver at the shop of a local gunsmith shortly before committing the crime. No impress on the body was held on the 12th at Hamblin's before the coroner sat on Saturday. The jury recorded a verdict of "Willful murder, and prisoner as committed for trial." He denies that he intended to commit suicide.

The funeral of the deceased alderman, who was very highly esteemed in the town, took place on Monday afternoon, amidst much popular sympathy. Many of the vessels at the church had the flag at half-mast as a token of respect.

An adjourned inquest into the case was held on Wednesday last. Mr. Weston, coroner for the port of Poole, and one of the sub-commissioners of police, produced a letter written by the prisoner, in which he stated his case to the sub-commissioners, and mentioned that he had an aged mother to keep, and said the sentence of the summary as to a beat was in the utmost consequence to him. The released alderman was against prisoner using his father's name. The prisoner was very responsive when laying his case before the commissioners. The prisoner in defence said, "I wish to say I have done wrong, and am prepared to undergo the full penalty of the English law." He was committed for trial at the assizes.

WITNESSES.

DEATH FROM FROST DROPS OF LANTERNUM.—At Wimborne, on March 24, Mr. Bragg, as he held an inquiry into the circumstances attending the death of Robert Roberts, a laborer at Messrs. White's, and witness. He had been ill for some time and troubled with sleeplessness. On the 19th inst. he went to a chemist for some lanternum, who supplied the drug with instructions that from ten or fifteen drops should be taken. Robert's death occurred and a fatal result ensued. A verdict of "Death from misadventure" was returned.

SCOTLAND.

ABERDEEN.

Mr. Morrison is opening a chemist's shop in the British Almshouse, and Dr. Alex. Keith is at present building a shop in Baker Street, Aberdeen, which will be ready to open as a drug shop. A new start is also to be made in Dundee.

The Aberdeen and North of Scotland Society of Chemists and Druggists held a meeting in the Free Church, where it was decided to have their annual dinner and trip on June 16. Peterhead was chosen as the place of resort, owing to a desire on the part of the chemists' world of Aberdeen for the members to come from their district this year. The following gifts to

the Society were acknowledged: a framed portrait engraving of the late J. C. of Hanbury, from his brother; eight volumes of "Forsyth's Book of Drugs," bound from Chapman & Hall; and various specimens from Mr. Green. It was announced that the president was in the printer's hands, and would be ready soon.

FRENCH CORRESPONDENCE.

(From our Special Correspondent.)

NEW APPOINTMENTS.—M. Pellerin, a pharmacist of the first class, has been appointed sub-commissioner professor professor of natural history in the National College of Medicine and Pharmacy. M. Dautet, professor of chemistry at the Metropolitan Society's School of Pharmacy, has been appointed for three years the director of this institution.

M. J. Chauvin dies cum.—On Tuesday, the 25th, the Academy of Medicine elected to full membership, for the section of pharmacy, M. J. Chauvin in the place of the late Professor Baudouin. The new academician is the son of the Vice-Dir. of the Paris School of Pharmacy. Many clouds have a silver lining.

THE FLOWERS OF PARIS IN THE SPRING.—It is customary every year to see at auction the flowers of the trees kept in the public gardens. The yield of the Tuilleries was estimated at 100 kilos., and that of the Luxembourg at 10. The latter weighed 2,350 kilos., a little more than 100 per cent., but the Tuilleries crop will have to be put up again in auction. These trees are very old, and of the Mirabilis or bitter variety: their flowers, according to the Parisians, are of finer fragrance than those of the southern orange trees. That may be, but Valdarno alone produces 1,000 tons of flowers every year.

THE COLLEGE OF PHARMACY IS STILL REMAINS CLOSED.—M. Maine-Bizot, the professor of natural history, has been instructed by the Superior Council of the Faculties, in which he represents the College of Pharmacy, to institute an inquiry respecting the late troubles. Several meetings of the professors have been held in which the disciplinary measures to be applied to the delinquents are said to have been discussed. A score or so of subjects have been examined, but so far the results have not transpired.

RASPUTIN AND HIS PATIENTS.—News has been received of the Russian patients treated in March and April last for the bites of a mad wolf. The attending physician reports that the sixteen survivors are enjoying perfect health. Last week four new Russian patients arrived in Paris, all victims of mad wolves. One of the men had one side of his face bitten off by one bite. So far over one thousand patients have been treated, entirely gratis, while the death roll consists of five in all, three from wolf and two from dog bites. At last accounts the subscription向着 the erection of a free hospital amounted to 728,300 francs, not including the grants voted by municipalities and other corporations.

THE FRENCH PHARMACISTS AND THE MILITARY LAW.—As a new military law is to be discussed by the Assembly, the General Council of the Faculties have presented to the Minister of Public Instruction some remarks and petitions (which they call them) respecting the most advisable mode of treating the students intending to follow the liberal professions. These are divided into six classes, namely, the faculties of theology, law, letters, sciences, and medicine, and the superior schools of pharmacy. The Council propose that all students who have matriculated in any of the foregoing, before they are drafted into the army, be allowed, after one year's satisfactory service under the colors, to obtain a postponement of the two years' service due to the State in order to complete their studies. Should they fail at examinations, be instantly in their attendance, or otherwise misbehave—as they do now and then—they would become liable to be promptly relegated to the army. The proposed military law exacts three years' service from every male citizen without any sort of exemption. As every young man is drafted before he is twenty-one, and cannot graduate in the faculties or pharmacy before he is twenty-five, unless some exception is made to the supply of priests, lawyers, professors, doctors, and pharmacists would be all but cut off. It would be all to the advantage of foreigners or their sons, who are not liable to military duty.

LANOLINE.

BY THOMAS MABEN.

THE announcement that a new ointment base had been discovered which was absorbed with freedom by the skin, and which was at the same time of an exceedingly permanent and stable character, has been received by all dermatologists with unmixed satisfaction. It remains to be seen whether the future of the new base, which has been named "lanoline," will be as satisfactory as we are led to expect from the comparatively limited trials that have been made with it on the Continent and in America; but so far it appears to be much superior to all the bases that have been hitherto employed, though in all probability the substance may not attain the phenomenal reputation which attended the introduction and use of vaseline.

It is unnecessary for me to enter into a statement as to the sources and method of production of lanoline; these have been frequently repeated of late. It is sufficient to say that we owe the new base to Dr. Oscar Liebreich, of Berlin, who conceived the idea that the substance would be useful in medicine in the course of his investigations as to the composition of keratinous cholesterol fats. The main source of lanoline is the grease of sheep's wool, otherwise known as wool oil, or suint, but cholesterol fats are very widely distributed in the animal economy. The chemistry of these fats generally has not yet been satisfactorily investigated, and our knowledge of the nature and composition of lanoline is consequently limited, but Dr. Liebreich promises to supply this deficiency in the near future. It seems quite certain that it does not belong to what are known as glycerine fats, its neutrality and also the extreme difficulty with which it saponifies, if, indeed, true saponification takes place at all, being sufficient proof that it occupies an entirely different position.

Lanoline comes into the market as a stone-coloured pasty substance, of a sticky tenacious nature, and having a very distinct odour of wool. It happens that when lanoline is exposed to the atmosphere the colour changes to a darker shade, becoming more of an orange tinge. This change is by Liebreich ascribed to the evaporation of the water that has been mixed with it, but I am inclined to receive the explanation with some doubt. When lanoline is heated for a very short time, small dark spots at once appear throughout the mass, and as the heat increases these gradually increase till the whole is of a homogeneous dark brown colour. The fact that this dry brown lanoline can be restored to its original colour by simply remixing it with water seems to favour Liebreich's hypothesis, but at the same time the theory does not entirely account for the phenomena attending the change when the substance is slightly heated.

Lanoline possesses characteristics which render it peculiarly serviceable in pharmacy. These are, its neutrality, its stability, its melting-point, the readiness with which it is absorbed by the skin, and its power of miscibility with water, advantages which are possessed by no other ointment base whatever. It is now possible to have ointments in which there need be no fear that chemical changes will ensue, while at the same time there is tolerable certainty that the active ingredient will reach its desired destination—a combination of qualities which was in many cases formerly difficult of attainment.

Lanoline is sent out by the makers mixed with a proportion of water. Unfortunately this proportion is by no means uniform, as three samples examined showed a wide variation in the percentage of moisture. One of these was obtained from Messrs. Geo. Haller & Co., who kindly presented me with a quantity, and the others from wholesale drug firms. Haller's lanoline contained 23 per cent. of water, and the other two 20·5 and 25 per cent. respectively. It is obviously most desirable that lanoline should be supplied of a uniform composition, which should also be stated on the label, for the guidance of prescribers and dispensers, or, better still, lanoline should be sent out dry, for a reason that will presently be noticed. Dr. Liebreich furnishes a number of tests which may be quite capable of giving accurate results in so far as the purity of lanoline is concerned, but which are really of no value whatever as tests of its strength or freedom from added water. For example, dry lanoline will absorb water weight

for weight, while the lanoline of Liebreich contains only some 25 per cent. of water. There is therefore nothing to hinder anyone from adding 75 per cent. more, a sophistication which it would be quite impossible to detect without drying the lanoline or taking its specific gravity. But even drying the lanoline would not be perfectly satisfactory, since there does not as yet seem to be a definite standard, and until this is fixed variations are certain to occur, though probably not to such an extent as to suggest adulteration. Dr. Liebreich says that, "If it be mixed or well rubbed with water on a ground-glass plate with an iron spatula the result must be a product containing over 100 per cent. of water," which is no doubt quite true, but it would be a mistake to infer from this, which might very legitimately be done, that "when kneaded with its own weight of water lanoline makes a perfect mixture," my experience being that this is impossible. The explanation is of course that Liebreich's lanoline already contains 25 per cent. of water, as has just been pointed out, so that the statement as it stands is somewhat misleading and might cause dispensers some annoyance.

The specific-gravity test is one which might be more satisfactory were it not for the intractable nature of the substance. I find the gravity to be extremely low, considerably lower than most known fats. Weighed in air and in water dry lanoline was found to have a specific gravity of .880 at 10° C. This seemed to be abnormally low, and I weighed lanoline containing 25 per cent. water directly in a sp. gr. flask, with the result that it gave .892 at 50° C. Deducting the water this gives us something like .856 for dry lanoline at 50° C., and, assuming that Allen's factor for lard represents the difference for lanoline for increased temperature, we get a figure which is almost identical with that first obtained. Allen gives .00065 as the increase or decrease for 1° C. for lard, and this, multiplied by the difference between 50° and 10°, viz. 40°, equals .026, which, added to .856, gives .882.

Thus

Dry lanoline at 10° C. weighs .. .. .. .. ..	.880
Moist lanoline (25 per cent. water) at 50° C. .. .. .. .. ..	.882

Therefore—

Dry lanoline (allowing for difference for water) at 50° C. .. .. .. .. ..	.856	.856
Difference for 40° C. .. .. .. .. ..		.024
Allen's factor for lard (.00065 × 40)		= .026

so that the results of the two weighings almost exactly correspond. Owing to the extreme difficulty of expelling the air, it is possible that these results may be too low, and the sticky nature of the material prevents the use of the hydrostatic balance method, which is usually very satisfactory. I am disposed to think, however, that the weight of dry lanoline cannot be much over .882 at 10° C.

For the sake of convenience a temperature of at least 50° C. is desirable if direct weighing be resorted to, and a little calculation from these figures will give the percentage of water in the sample. Of course, if glycerine or fats have been added, the results will be correspondingly affected, and the estimation of the dry lanoline rendered more complicated. Here, again, is a strong argument for dry lanoline being sent out. None of the animal fats come under .890 at 50° C., and glycerine is very much heavier, so that the variation is sufficiently wide to enable adulteration to be readily detected, provided no water be present.

In addition to its neutrality and stability, the melting-point of lanoline is a valuable feature. The sample of dry lanoline which I examined began to liquefy at 37° C., which is almost identical with the normal temperature of the skin. This fact makes it quite possible to use lanoline without adding any fat or oil as has been recommended by Liebreich. The addition of these save in cases where too hard an ointment would be produced is, in the experience of Dr. P. M. Penman, who has been using it freely for some time past, and of myself, quite unnecessary.

Dr. W. Allan Jamieson, the eminent Edinburgh dermatologist, writes that his experience with lanoline is too limited for him to express any decided opinion. On the whole he has considerable doubt if it deserves all that Liebreich has said about it. The combination that he has so far found best is with sesame oil: generally six parts of lanoline to two of oil. He has not been able to assure himself that in other

combinations it really possesses any great advantages, nor is he at all sure that it penetrates the epidermis freely. In one case a patient used a prescription containing 3 grains of corrosive sublimate to the ounce of lanoline and oil of sesame for nearly two months without any evidence of absorption. In this case of course very little was applied, but it was well rubbed in. Dr. Jamieson's authority in all matters relating to dermatology is so great that his opinion founded on more extended experience will be looked forward to with much interest.

Some ointments lend themselves much more readily than others to producing good results with lanoline as a base. Citrine ointment, for example, is one which might be supposed to present features of difficulty, but a really good preparation is obtained by using this formula —

Hydrargri ..	..	..	..	..	..	3 <i>j.</i>
Acid. nitrici ..	..	..	..	..	..	3 <i>viii.</i>
Oil. olive ..	..	..	..	..	..	3 <i>viii.</i>
Lanolin : ..	..	..	..	..	..	3 <i>viii.</i>

Mise: secundum artem.

This gives a bright citron yellow ointment, which keeps its colour well and shows after several weeks no signs of decomposition. The ointment is quite as free from acid as that of the British Pharmacopoeia, and may be safely diluted with lanoline in any proportion.

For medicines such as tannin and iodide potass., which require to be applied externally, nothing can be better than simply to dissolve in water and mix with the lanoline. I find also that excellent ointments are prepared from the metallic oleates. The B.P. zinc oleate, with a small proportion of oil and an equivalent of lanoline, gives an ointment which is very freely absorbed. The oleates of bismuth, mercury, and lead may be similarly treated, the proportions being regulated according to strength required.

Chloroform liniment can be prepared from dry lanoline, which is freely soluble in that liquid, as well as in ether and bisulphite of carbon, but insoluble in absolute alcohol. Other applications of the base will be found as it becomes more familiar to medicine and pharmacy, but it is safe to say meantime that by the introduction of this substance a very great stride has been taken in the direction of more effective, as well as much cleaner, administration of external remedies by means of ointments, provided the experience of dermatologists confirms the reports that have preceded it from Germany.

Hawick, N.B., May 21.

BISMUTH CITRATE.

BY R. ROTHER.

THE profession of pharmacy doubtless accept it as a fundamental fact of their vocation that pharmacy is not chemistry, although practical chemistry may be the root of it. Now even the scientific part of pharmacy is utterly concrete. But chemistry itself is only an abstract-concrete science, and, therefore, essentially distinct from mathematics, which is an abstract science *par excellence*. An abstract science pure and simple deals only with space and time relations, whereas concrete science treats of the relations among things. In abstract science theory and fact are identical. But in concrete science both theory and fact are only approximate. It therefore seems like a slight comprehension of the meanings of words to affirm in all seriousness that pharmacy should be as exact a science as mathematics. When balances and manipulative skill can readily apportion not merely up to the molecule, but to the restless atom, will be the proper time to look into the mathematical accuracy of pharmacy.

It is now also believed that there is a more prevalent activity in operative pharmacy than heretofore, and that the manifestation of such spirit is due to better chemical knowledge among the craft. There will always be some whose mental trend diverts their activities into peculiar channels,

and as the whole aggregate augments, their numbers will also correspondingly increase. It can, however, be shown from *à priori* grounds that although the actual number may be greater their totality will be comparatively smaller. Is, however, questionable whether there is such a leaning towards the presumed accuracy. If, as is also thought, universal distress, or rather growing avarice, is the incentive to productive energy, it only shows that the rectifying factor is merely of secondary import. The aim appears to be not so much towards an ideal purity as the ready acquisition of the greatest amount of available product, that is real substance. General experience, however, goes to show that there is ultimately no gain in this particular field of operative pharmacy, and that its scope is incredibly restricted. In this connection the British apothecaries are at present considerably exercised over the shortcomings of their new Pharmacopoeia, and incidentally the writer has been adversely criticised on his process for preparing bismuth citrate. At the very outset the writer had observed in connection with this process that a considerable opacity resulted when the bismuth citrate thus prepared is treated with ammonia. The writer credited this turbidity to the presence of bismuthyl chloride, with which the commercial nitrate is known to be contaminated. On a later occasion it was thought desirable to ascertain its relative amount and incidentally its identity. Hence 200 grains of the citrate was mixed with some water and treated with ammonia in excess. The mixture was set aside, and when the turbidity had firmly subsided the clear liquor was decanted. The residue was repeatedly washed and finally dried. It was found to weigh 2*½* grains. Consequently it amounted to 1*½* per cent. The dry substance had a dingy white appearance. When heated in a dry test tube it evolved some water but no very distinctive odour. The residue on further heating to redress at first turned brown, and finally became light yellow. The unheated body did not dissolve in dilute nitric acid even on boiling; it, however, readily dissolved in cold strong nitric acid. When this solution was diluted with water and treated with ammonia the characteristic bismuth hydrate was precipitated. On treating the clear supernatant liquor with barium chloride and nitric acid a very distinct sulphuric acid reaction became evident. On adding argentic nitrate to the dilute nitric solution of the body an abundant white curdy precipitate formed. This on washing readily dissolved in ammonia water, from which solution nitric acid promptly liberated it. On exposure to light the precipitate became deep purple tinted. These results showed that the insoluble residue is chiefly bismuthyl chloride contaminated with sulphate. The precipitation of bismuth hydrate from its nitric solution by means of ammonia shows the absence of citrate as also does the non-appearance of empyreuma on incineration. Its relatively small amount further shows the phenomenal purity of American subnitrate of bismuth.

It thus appears that the Scotch apothecary did not examine the bismuthyl citrate which he proclaimed with such confidence. His result is surely not an encouraging "outcome of better chemical knowledge."

In conclusion the writer will say without arrogating any importance to himself that the Revision Committee of the U. S. Pharmacopoeia showed rare discretion in not permitting a slight impurity or prejudice to stand in their way of adopting a practical and efficient process.—*American Journal of Pharmacy* for May.

As the foregoing appears to be a criticism of a paper by Mr. Peter MacEwan, published in this journal in January last (page 17), we append a rejoinder from the latter:—"Mr. Rother does not carry his ingenious argument far enough. I take the outcome of it to be that, starting in the preparation of bismuth citrate with commercial nitrate according to the British and United States methods, it will be found that the insoluble matter, referred to in the paper which Mr. Rother criticises, consists of chloride and sulphate of bismuth, which pre-existed in the bismuth subnitrate. Carrying the argument further it would appear that by adopting a third process, namely, Mehu's, a citrate is obtained which is completely soluble in ammonia, and is therefore free from the chloride and sulphate which were in the bismuth subnitrate to begin with. Ergo, follow Mehu's process, for thereby you will get rid of impurity arising from chloride and sulphate. But, to descend to the prosaic, the bismuth subnitrate which I used in the experiments described in the paper before-mentioned was free from sulphate and afforded only a faint indication of the presence of chloride. The other chemicals employed were equally free from these impurities, and the same facts were determined regarding the citrates prepared from them. It never struck me to call in logic to aid in what I failed to find by experiment. Moreover, recent examination of the unfiltered solutions corroborates previous observations.—P. MACEWAN."

THE NECESSITY OF CORRECTNESS IN MEDICAL WEIGHTS.

BY W. H. MAXWELL BLEWS,

Inspector of Weights and Measures, Birmingham

Read at the meeting of the British Association of Inspectors of Weights and Measures in the Town Hall, Warrington, Monday, May 24, the Mayor presiding.

THE paper I am about to read on the necessity of correctness in medical weights is in part the result of conversations I had on several occasions with our late lamented secretary, Mr. Wimhurst.

We both felt the imperative need of more perfect instruments for testing the accuracy of medical weights, and the still greater need for insuring correctness of weights to be used in the preparation of medicines requiring most delicate manipulation in the quantities defined by the physician's prescription.

An admirable paper was read by Mr. W. Shaw at Leeds last June meeting on the importance of suitable appliances in verifying weights and measures of apothecaries; and I desire my efforts to be directed to the practical result of obtaining for all inspectors such balances and instruments as will enable them confidently to test all grain or apothecaries' weights presented for trial; and I hope to awaken the authorities of cities and towns to the vital importance of providing their officers with such balances and instruments as will enable them to correctly discharge the responsible duties given into their hands.

At the present moment I fear it may be said to the weights and measures authorities in many towns, "Physician, heal thyself." To speak plainly, I believe a mistaken economy has been followed in not providing adequate appliances to enable inspectors to discharge their duties with absolute correctness.

In October, 1882, Mr. Wimhurst, the father of this Association, presented to the Corporation of Manchester a tabular statement of scales, weights, and measures examined in that city from 1873 to 1882.

In 1873 no fewer than 27,950 shops and warehouses were visited; 57,848 scales were subjected to examination; and 171,869 weights—of which weights 30,616 required readjusting. Is it possible to over-estimate the services discharged by weights and measures inspectors? And is it not a wretched economy which hesitates to provide these men, generally most intelligent and conscientious in the discharge of their oftentimes unthankful duties, with the best and most perfect of instruments.

The multiple of 30,616 incorrect weights may represent in the course of one year millions of cases of dishonest sales—what is the result, if only in the same ratio a similar average of defective weights are used in all the thousands of cities, towns, and villages of Great Britain?

I have often felt that the services of the esteemed founder of our Association have not yet been fully recognised; and I do not hesitate to say that the question of correct weights and measures, and the provisions for insuring the toiling masses, the trader, and the merchant of this great commercial country from deception in the commodities they buy, is not second in importance to the vital sanitary questions which are now exciting the attention of the municipal and other authorities.

My desire is mainly to make suggestive remarks, as it is impossible in the limits the present opportunity affords, to supply an exhaustive article upon a subject of such interest to all; and I hope the remarks I have made may not be thought discursive nor irrelevant. I will now call your attention to special consideration of the subject under review.

Authorities inform us that troy weight is the ancient weight of this kingdom, having existed in the same state from the time of King Edward the Confessor. It is believed the word Troy has no reference to any town of that name, but to the early Monkish name given to London "Troy Novant." Troy weight, therefore, is London weight; its importance is increased by the fact that all our national coinage has been uniformly regulated by it; and all medical prescriptions or formulae now are, and always have been, estimated by troy weight under sub-divisions, which the College of Physicians

have expressed themselves most anxious to preserve, of scruples and drachms.

On account of the accuracy of the troy standard, the Commissioners of Weights and Measures in 1825 resolved to raise the avoirdupois weight from this basis. Avoirdupois, the name probably derived from Avoir (Averia), the ancient name for goods or chattels, and Poids, weight, was found universally used for heavy goods in this country; but this weight did not appear to have been preserved with the same scrupulous accuracy as the troy weight, and it was enacted, that "From and after the 1st day of May 1825 the standard brass weight of 1 pound troy weight made in the year 1758, now in the custody of the Clerk of the House of Commons, shall be, and the same is hereby declared to be, the original and genuine standard measure of weight, and that such brass weight shall be, and is hereby denominated the imperial standard troy pound, and shall be and the same is hereby declared to be the unit or only standard measure of weight, from which all other weights shall be derived, computed and ascertained; and that 1-12th part of the said troy weight shall be an ounce; and that 1-20th part of such ounce shall be a pennyweight; and that 1-24th part of such pennyweight shall be a grain: so that 5,760 such grains shall be a troy pound; and that 7,000 such grains shall be, and they are hereby declared to be, a pound avoirdupois."

I need hardly remark that latterly modifications have been made in the divisions of troy weights, but the grain still remains.

To prove the necessity of accurate balances for testing grain weights, some months ago I had 2 gross sets of grain weights examined and stamped by a duly authorised inspector. I forwarded some of these to three eminent London firms, also to the Standards office, Westminster, and to our late friend Mr. Wimhurst, then chief inspector of weights at Manchester. The result of Mr. Wimhurst's careful examination of 84 weights, showed 6 correct, 78 incorrect. Of 42 weights sent to one firm, 4 were correct, 38 incorrect.

One firm objected to examine any weights that had previously been tested and stamped by an inspector.

The third firm found every weight incorrect.

Mr. Chaney, the head of the Standards Department, Westminster, had 84 weights tested, and he kindly favoured me with detailed particulars of every weight. The result showed that of the 84 only 2 were correct.

The summary is as follows:

Weights	Correct	Incorrect
84 tested by Mr. Wimhurst ..	.. 6	78
42 ,,, one London firm ..	.. 4	38
84 ,,, another London firm ..	.. 0	84
84 ,,, Standards office ..	.. 2	82
294	12	282

or as nearly as possible 4 per cent. correct and 96 per cent. incorrect.

Need I remark what serious if not fatal consequences might result from medical prescriptions in which drugs of intense potency are used (requiring only minute quantities), if such inaccurate weights are permitted, thus frustrating the efforts of the most skilful physician.

I have submitted a list of these grain weights to some of the greatest physicians and most eminent chemists. In all their replies one opinion is expressed—the absolute necessity for perfect balances and correct standards.

I believe the defects which arise are from the use of balances inadequate to the work.

We do not blame the inspector—but can we free the local authorities of towns, who fail to provide the requisite instruments to enable their officers to carry out the onerous and responsible duties entrusted to them?

Personalities.

MR. GOYNE STEVENS, chemist, North Street, Brighton, has been elected to the Brighton Town Council to fill a vacancy caused by the death of one of the members.

MR. ROBINSON, chemist, 30 Suffolk Street, Birmingham, is removing his stock, &c., to 8 John Bright Street. This is Mr. Robinson's "fourth move."

COLONIAL AND INDIAN EXHIBITION.

(Second Notice.)

SINCE our first report was published (May 8) great advance has been made. The clank of the hammer has ceased, boxes have been stowed away until the autumn, and commissioners and their allies have changed the excitement of hurried preparation for the quieter, if no less busier, duties of receiving visitors. Our first impressions of the exhibition are agreeably sustained; for varied interest, beauty, and magnificence the exhibits far surpass those of preceding summers. The reason of this soon becomes apparent as one walks through the courts. Nature has directly filled up much of the space with useful and ornamental products, with living plants and animals; the aborigines of our colonies have contributed their quota, and lastly come our kith and kin from beyond the seas with exhibits which reflect in a highly characteristic manner what western ability and skill, combined with colonial energy and push, is capable of doing. In the Australasian courts these features are peculiarly prominent. It would be unwise to place before our readers passing notes on the exhibits which are more intimately allied to pharmacy, without pointing out the fact that there are but few exhibits in any class which are not of general interest.

NEW SOUTH WALES EXHIBITS.

Much space is occupied in this court by minerals, mining implements, &c., which cannot fail to impress the observer with the enormity of the mineral wealth of this colony, in common with her neighbours. Mr. Edward Combes, C.M.G., one of the Commissioners for New South Wales, in a lecture recently delivered to the Society of Arts, stated that the total quantities and value of minerals raised in the colony to December 31, 1884, were:—Gold, 9,596,653 oz, valued at 35,724,179/-; silver, 936,122 oz, valued at 233,697/-; coal, 31,261,326 tons, valued at 15,709,291/-; shale, 370,217 tons, valued at 828,193/-; tin, 71,109 tons of ingots and 15,618 tons of ore, valued together at 6,519,177/-; copper, 64,953 tons of ingots and 3,402 tons of regulus, valued together at 4,531,665/-; iron, 25,569 tons, valued at 206,060/-; antimony, 2,473 tons of ore and 142 tons of regulus, and 366 tons of metal, valued together at 57,921/-; bismuth, 33 tons, valued at 6,310/-; and 407 tons of mixed minerals, of a value of 12,286/. The aggregate value, therefore, of the metals and minerals which have been produced in New South Wales amount to 64,068,584/. Much of the coal resembles our own Wallsend, but anthracite, cannel coal, shale, and other paraffin-producing minerals are also plentiful, the supply, according to Mr. Combes, being such that "it will probably last as long as the world lives." A few generations hence our successors will have a more direct interest in the coal question than we at present have, but to us it is a comfort to know that the Greater Britain of Oceania can supply the mother country if need be.

The exhibits of minerals, as we say, are enormous as to amount and quantity. Two representative collections formed by Professor Archibald Liversidge, F.R.S., of the Sydney University, and by Mr. Martin Isaacson, are very tastefully displayed. The former is devoted chiefly to gold and precious stones, to silver ores, and "keroscene shale," a kind of jet which breaks off with a well-defined conchoidal fracture. Mr. Isaacson's collection is more extensive, and in addition to geological specimens includes the minerals mentioned by Mr. Combes, some of which are exceptionally fine. The Minister for Mines exhibits a wonderful collection which has been arranged by Mr. J. E. Carne, curator of the Mining and Geological Museum, under the direction of Mr. C. S. Wilkinson, F.G.S., Geological Surveyor. The collection includes typical specimens of native minerals. The copper, argentiferous, and antimony ores are excellent specimens, so also are the bismuth ores and cinnabar. Asbestos is also included in this exhibit: at present this is not much worked, but it is of good quality, and can be supplied in fair quantity should a demand spring up. Of forest produce the exhibits consist principally of timbers and tanning materials. The timbers are an excellent exhibit, and are chiefly similar to those of the Victorian court, which will be afterwards referred to. Amongst the medicinal products which are exhibited is the familiar Fever Bark, *Alstonia*

constricta, F. Mueller, which has had its day, and ceased to be in this country. Another bitter bark, that of *Tabor-narmontana orientalis*, closely resembles the fever bark, and belongs to the same natural order (*Apocynaceae*). This bark is used as a tonic. The only other bark of medicinal importance shown by the Minister of Mines is "Sassafras" or *caalang*, obtained from *Doryphora Sassafras* (N.O. Monimiacew), a tree which closely resembles, but is quite distinct from, the sassafras of Tasmania, *Atherosperma moschata*, a specimen of which is shown in the Victoria section. The eaelang is a tree which is found in the northern and southern bush forests, and on the Blue Mountains of New South Wales. The leaves of the tree exhale an aromatic olour, which is said to fill the bushes with the most delicious fragrance, recalling the odour of fennel. The bark possesses tonic properties, and is used in the form of a decoction. The same exhibit contains a large number of tanning barks, and in a case close by there are collections of gums and seeds which have not yet been arranged for inspection. Our space does not permit us to describe on this occasion all the exhibits of manufactured goods, which are more or less allied to pharmacy. Tobacco cultivation and manufacture, which is a growing industry in New South Wales, is represented by several firms, amongst whom Messrs. Sutton & Co., 268 George Street, Sydney, are the most prominent exhibitors, their case containing some excellent samples of leaf.

Messrs. Parry & Co., 594 George Street, Sydney, have a well-assorted drysaltery exhibit, which includes, amongst other articles, vinegar, plain and spiced, baking and egg powders, olive oil and extract of soap. An exhibit much similar to this will be seen in the large wall-cases of Messrs. Perico Brothers of the same city. This case is devoted to food stufls and condiments chiefly, but it contains a "household remedy" which strikes us as a pleasing change of name for summer saline, which the remedy really is. There are many other exhibits in this class which will call for comment in future, but we have not in the meantime seen them to advantage. In the scientific instruments department Mr. T. F. Weisener, George Street, Sydney, has an excellent caseful of barometers, thermometers, levelling instruments, &c., which compare very favourably with those of home manufacture; and a compound microscope made by an apprentice, with all the accessories which an enthusiast could desire, is well worth inspection. Like the other colonies, New South Wales has its conservatory, in which some species of *Acacia* are at present in bloom.

VICTORIA.

This court is of more than ordinary interest to pharmacists from the fact that the President of the Commission, Mr. Joseph Bosisto, is himself a pharmacist of world-wide repute in connection with the introduction into therapeutics of various products of the eucalyptus genus. The arrangements of the court have been made entirely under Mr. Bosisto's superintendence, and the best testimony to the efficiency of his work remains in the fact that the Victorian Court was amongst the first that were finished. We have already referred to the fernery in this court; the idea of this is to represent a fern gully, such as abound in Victorian forests, and in which the ferns grow to amazing size. The effect of the gully is charming. A striking and in some respects unique exhibit is made of timber trees in another part of the court. The timber has been arranged in the form of a bay upon a raised platform each kind of wood is shown in longitudinal section, highly polished, named, and artistically decorated with a coloured sprig of the fruit, flower, and leaf. The exhibit is by the Technological Museum, of which Mr. Cosmo Newbery, C.M.G., is superintendent, and has been prepared by Mr. F. W. Barnard, with the assistance of Miss M. Vale as artist. Acacias and eucalypts predominate in the collection, but none of these equal, in beauty of figuring, the wood of the She Oak, *Casuarina glauca*, *C. quadrivalvis*, and *C. suberosa*. The acacias, like eucalypts, are trees of varied application. Several of them yield wattle gum, and nearly all afford bark of good tannin value. Some of them are used for charcoal making with good results. *A. decurrens* (common wattle), for example, yield 26-125 per cent. of charcoal, 44-75 per cent. of erode vinegar and 7-125 per cent. of tar. Baron von Mueller has also demonstrated that the bark of some acacias is a good paper making material. Australia being the home of the eucalypt we naturally expect to find a good representation of the genus and here we only call attention to the timbers, reserving

reference to the products for another exhibit. It may here be pointed out that in all the Australian Courts are numerous herbaria, the completeness and elegance of which reflect great credit on the exhibitors. To the Victorian Court Mr. W. R. Guilfoyle, F.R.S., Director of the Melbourne Botanic Gardens, sends several collections, which are most complete in character and finish. Medicinal, pharmaceutical, and chemical products fill up more space in the exhibition than might be expected. The principal manufacturing firms of Victoria have come forward in good style, and exhibits as a rule are displayed with great taste. Prominent amongst them is the case devoted to the manufactures of Messrs. Joseph Bosisto & Co., Melbourne, the firm founded so many years ago by the President of the Commission, but of which he is not now an active partner. It scarcely requires to be repeated here that to Mr. Bosisto is due the credit of introducing eucalyptus products into therapeutics, and the cultivation of the more hardy varieties in malarial districts. Eucalypts possess two well-marked functions which are directly beneficial in combating the natural dangers of malarial and swampy districts. The first and not the less important is the great power which they possess of absorbing water, so powerfully and rapidly do they drain the soil of excessive moisture, that the trunks of some species present at certain seasons the curious feature of huge swellings between the wood and bark, due to water stored therein. The second property, or function, is in the aromatic and antiseptic exhalations of volatile oil from the leaves. When Mr. Bosisto first called attention to these properties, the germ theory of disease had not received the attention which its present important position had given it. To this fact, indeed, is due the early unremunerative struggle which Mr. Bosisto had to get eucalyptus oil introduced as an antiseptic. He had no trouble in the colonies, where the oil is a household and universal remedy, but Europe was slow to take it up, until Germany, to begin with, and lastly the mother country, recognised the value of the oil. Consequently, the eucalyptus oil industry has developed to a great extent during the past decade, and a fair idea of its present state may be had from the fact that J. Bosisto & Co. have never less than 20,000 acres of land under cultivation, and four stills, of 5,000 gallons capacity, are steadily in use during the season. It is well to state here that it is impossible to confine the plantations to one district, and wherever an accessible track of waste and useless land is available, the firm, who hold Crown permission, plant it with eucalypts. *Eucalyptus amygdalina* is the best oil-yielding species; not only do the leaves yield a much higher percentage of oil than any other, but the foliage itself is much more abundant. When the industry was in its infancy, and Mr. Bosisto could personally select the trees which should be used, only old plants of the true *E. amygdalina* were selected, and it was the oil from this which possessed the golden colour and characteristic perfume which made it so adaptable as a deodorant. But this oil had the disadvantage of becoming very thick and of varying in colour; therefore it was rectified so as to retain the antiseptic properties and get rid of the oleo-resinous body which caused thickening. Latterly, however, as the demand has grown, old and young trees alike of *E. amygdalina* and several varieties thereof have been used. These varieties differ from the parent species only in the flower—the detection of the difference is only possible with the microscope; and as this instrument is not included in the husbandry implements of the bushmen, necessity has required that the leaves of the varieties as well as the true species should be collected together. The oil which these yield is in no degree inferior antiseptically, and for convenience is now designated "oil of eucalyptus of commerce." We have had the opportunity of examining these oils, and the "oleo-resin" which is separated from them on rectification. This body, which has the consistency of thick cream and is of a brown colour, has until recently been a waste product. In odour it cannot compare with the original oil, it is in fact somewhat empypreumatic, but possesses also that characteristic fragrance which the oil loses on rectification. Recently a use has been found for the "oleo-resin" as a deodorant for earth closets. Its application for this purpose is the subject of a patent, but the principle is simple enough, a piece of felt being soaked with the fluid and suitably placed in the closet. The firm also show other eucalyptus oils, including the *damosa* oil, which is chiefly used in soapmaking as a perfume, as well as in many disinfectants which have come into

notice within recent years. This oil is more terebinthinous in its nature than the *amygdalina* oil; nevertheless the demand for it for the purposes we have named is even greater. Eucalyptol is also exhibited. This body ($C_{12}H_{20}O$ according to Clooz) is obtained from *E. C'ebulus* and *E. amygdalina* oils, by treating with calcium chloride and caustic potash and distilling, 2 per cent. only, according to Mr. Bosisto, being obtained. Several pharmaceutical preparations of eucalyptus oil and leaves are also exhibited. The case includes several varieties of eucalyptus kino, which will be more fully referred to in connection with Baron von Mueller's exhibits. Amongst other resins are specimens of those obtained from *Xanthorrhiza australis* and *X. hastilis* (or gum acaroides). The former, a red gum, is obtainable in immense quantities; large deposits of it, the collection of centuries, being found in the forests. It resembles dragon's blood, but as it possesses more body it deserves a wider application than it has at present as a varnish-making resin. The *hastilis* resin is of a yellow colour, and has been used to some extent in this country by bookbinders. We would call attention to the sassafras bark (*Atherosperma moschata*), its tonic principle—atherospermine, an alkaloid discovered by Zeyer—and an essential oil, which appears to be more powerful physiologically than most essential oils of the aromatic class are. Samples of poppies and opium obtained from them are also shown. To these we refer more fully on another page. F. Longmore, Melbourne, has a handsome wall case devoted to perfumery. This is a very effective display so far as arrangement of the flasks, &c., are concerned. The perfumes are mostly of well-known kinds, and are tastefully put up. There are also various kinds of toilet requisites, which would compete successfully with those of home manufacture. Messrs. Lewis & Whitty, Flinders Street West, Melbourne, exhibit soaps, washing powders, and condiments, and Messrs. P. J. Dixon & Co., 32 Rosslyn Street, Melbourne, make an excellent exhibit of aerated waters. The case in which these are shown is glazed on the upper part, and the under part is merely encircled with wire netting, so as to show a mimic stock of the waters in the ordinary van-boxes. In the glazed case all varieties of waters are effectively shown in bottles and syphons, and a pleasing variety is added by the addition of flasks of cordials and syrups. Those which are suspended from the top of the case in wire baskets help to give a very good effect. Mr. Lewis Loan, of Wallalla, Gippsland, makes a good show of aerated and mineral waters, fluid magnesia, &c., and close by, in the exhibit of the Warrenheip Distillery (30 Lydiard Street, Ballarat, and Mount Warrenheip, Dunnstown), rectified spirit is included along with several potent beverages. There are some exhibits which are yet only partially on view, and to these we shall refer more in detail in a future notice. Baron von Mueller, K.C.M.G., Government botanist, Melbourne, the author of the classical work on eucalypts, "Eucalyptographia," has various exhibits throughout the court, and close by Messrs. Bosisto & Co.'s he has several cases devoted to forest products, and their application to useful purposes. An exhibit in Class 36 is devoted to gums, kinos, and resins. Of coniferous species, the oleo-resin, turpentine oil, and colophony obtained from *Pinus Pinæa*, *P. Pinaster*, and *P. halepensis* are shown. These have evidently been prepared specially for exhibition, they being in small quantities, and the oils (a few drachms only) are quite milky. A clear brownish wattle gum from *Acacia heterocarpa*, and the tanning bark of *A. estrophiolata* are also shown. The large part of this exhibit consists of specimens of kino, of which there are no less than eleven kindsshown, obtained from the following trees, some of which flourish in Victoria, and others in adjoining colonies: *Eucalyptus maculata*, *E. Sieberiana*, *E. tessularis*, *E. rostrata*, *E. calophylla*, *E. Stuartiana*, *E. paniculata*, *E. hemiphlebia*, *E. riminalis*, *E. macrorrhyncha*, *E. regnans*, *E. obliqua*. Quandong nuts from the native peach (*Santalum acuminatum*) are a prettily marked globular nut, which are made into personal ornaments; the kernels are edible and yield an oil by pressure. "Tragacanth," from the Victorian bottle-tree (*Sterculia diversifolia*, the *Brachychiton populneum* of Robert Brown); sandarac, from *Callitris cupressiformis*, Kauri gum, a large sample of gum acaroides, and one or two specimens of minor importance complete the exhibit. Baron von Mueller also contributes several herbaria. Mining receives a large share of attention in this court, and the beauty of the decorations, together with the excellent art

exhibit, help to make it one of the most attractive parts of the exhibition. We reserve meanwhile our account of the other Australian courts.

THE DOMINION OF CANADA.

This country occupies a space befitting so important a community. Its principal exhibits are shown in a large central gallery running from east to west, while smaller courts, scattered all over the exhibition grounds, are devoted to art, education, geology and mineralogy, forests, bee-culture, fisheries, &c. In the latter section a large variety of cod-fish attract attention; among the largest members of the family is the cultus, or blue eel, from Victoria, British Columbia, a monster over $3\frac{1}{2}$ feet in length, with speckled brown skin. The tom-cod, or frost fish, from Halifax (N.S.), is the smallest of those exhibited; it does not attain 9 inches in length, and is of pale brown colour. The Skidegate Oil Company, of British Columbia, have in this section a show of various steam-refined lubricating and illuminating oils, containing some beautiful samples. Passing on to the educational section we pause on our way at the fine exhibit of the Entomological Society, having their headquarters at London (Ontario), who have sent nearly 70 cases of Canadian insects, comprising some 3,000 specimens. The honey-bee is there represented, so are the *Bombus* and *Vespidae*, but by far the greater part of the collection consists of beautifully marked butterflies. The Ontario Pharmaceutical College, Toronto, exhibit a single photograph of the exterior of their new college, which is a handsome enough structure. The photograph, however, has not yet found a place on the wall. The Veterinary College of Toronto cuts a greatly better figure than its pharmaceutical brother, being represented by several handsome photographs, showing the college itself with a group of the students, the graduating class of 85 members, headed by the principal, Professor Smith, V.S. Edinburgh, and the teachers; and various pictures of the dissecting-room, showing students at work. The Toronto School of Medicine and the Kingston Royal College of Physicians and Surgeons have also sent photographs of their respective buildings. In the central gallery Mr. Isaac Waterman, of London (Ont.), has a fine stand of Canadian petroleum products, showing the oil in its various conditions. Paraffin wax in tablets, candles of various sizes and colours, tumblers, paraffin flour, and a blancmange of paraffin are also found in this stand, which is indeed a very attractive-looking one. Messrs. Archdale, Wilson, & Co., of Hamilton in Canada, have a large exhibit of pharmaceutical preparations, principally fluid extracts and medicinal elixirs, prominent among the former being damiana, sarsaparilla, senega, guarana, blue flag, henbane, lobelia, spikenard, blackberry, and squaw vine. The firm have also an establishment at 37 Hogarth Road, Earl's Court, London. Nearly opposite Messrs. Archdale, Wilson & Co.'s stand is the beautiful and tastefully got up exhibit showing the New Brunswick forests. With such a treasure of wood at her command it would indeed be surprising if this state had not made an interesting show. Trunks of trees form the basis of the structure. Among them we notice the black ash, elm, red or swamp maple, black birch, hemlock, a beautiful reddish trunk, and the balsam fir (*Abies balsamea*), grey mossed all over. These trunks are surmounted by pictures of different trees, painted on their own wood, and prominent among which are the willow, white willow (*Rhus typhina*), sumach, and witch-hazel (*Hamamelis virginica*), the latter with coarse, strongly-veined bright green leaves. Above these pictures are sections of different kinds of wood, set off by thinner trunks and crowned by a façade adorned with stuffed birds and animals.

Messrs. D. A. McCaskell & Co., of Montreal, have a handsome exhibit of paints and varnishes, prominent among them being finishing and drying body varnish in tins, and polishing varnish. The firm are also large dealers in linseed oil, for which article they obtained a diploma at the Toronto Industrial Exhibition. A large stand close by is devoted to more palatable commodities—viz., Johnson's desiccated oysters, and other edible preparations. Another Toronto firm, Messrs. Elliott & Co., are also in the field with ground and screened linseed, and with crushed and ground oilcake. White lead and putty are also among the articles exhibited by this house.

Mr. Thomas A. Keefer, of Port Arthur, Ontario, has a number of exhibits scattered throughout the Canadian Court, one of the handsomest being a pile of logs of different

Canadian woods, surmounted by a handsome specimen of a beaver. On the top of the pile several articles of Indian and hunters' attire are placed, the medicine bag of an Ojibbeway medicine-man being among them. The bag is made of very handsome buff fur, bordered with red and blue cloth of the plainest description. Unfortunately it is empty; had Mr. Keefer been able to show us some of the preparations of Indian medicine, the exhibit would have been doubly interesting.

Messrs. Evans, Mason, & Co. (Limited), as a Canadian house, are able to get a footing in this Exhibition, and they take advantage of their opportunity in a very effective manner. They have a fine exhibit just at one entrance of the Canadian court, where they have erected three pyramidal stands, presenting chiefly the Montserrat Lime Juice and its preparations, Florida water, and a long series of fluid extracts. They throw in also a number of cases of Lamplough & Campbell's Ursina, "the pure grease of the Canadian black bear," for which they are agents, and which we should suppose they intended to have unpacked. In the wooden boxes we scarcely realise the bear.

Messrs. Lyman, Sons, & Co., of Montreal, have a very varied assortment of drugs and chemicals, the labelling of which is a little old-fashioned. Canada balsam, in tins, is a speciality of this collection.

Canadian proprietary medicines are represented by Puttner Bros., of Halifax, who contribute a large pile of Budd's Cream Emulsion of Cod Liver Oil; and W. J. Nelson & Co., of Bridgewater, Nova Scotia, who are the proprietors of Minard's Liniment, which seems to be a sort of Colonial "Elliman."

The mineral wealth of the Canadian Dominion calls for a separate court for its exhibits. Copper is one of the ores most frequently met with, fine samples being shown by the Albert Mines, Ascot, Quebec, and by the Lake Superior Copper Co., of Abchurch Chambers, London, E.C. Of asbestos, also, there are many exhibits, the principal one being that of the Anglo-Canadian Asbestos Company, whose products are manufactured by Messrs. Irwin, Hopper, & Co., of 110 Cannon Street, London. When the Canadian asbestos was first introduced into this country, it met with very little encouragement on the part of the purchasers, who would not look at any other than the Italian variety; but the Canadians, convinced of the excellency of their product, did not lose courage, and have now succeeded in obtaining a firm footing for their article. The Canadian asbestos is softer than the Italian, but much shorter in fibre. Its price ranges from 12*l.* to 20*l.* per ton. The total yield of the Canadian mines during the last year is computed at 1,500 tons. Asbestos consists mainly of silica and magnesia; its percentage of moisture is said to be about 8 per cent.

The Pare Gold Manufacturing Co., of Toronto, send a large variety of flavouring extracts in bottles, "rubbed herbs" in tins—such as sage, thyme, sweet marjoram, &c.—for seasoning, curry powder, Canadian chicory, and other products on the border land between drugs and grocery; and in a cosy recess young ladies are busy giving away samples of the manufacture of the Johnston Fluid Beef Co., Montreal, which are being consumed on the spot.

HINDE'S "VERY" BRUSHES.

There is a little ease in the Imperial Court of the Indian Section showing bristles and rubber, satin-wood and ivory, all of Indian production, used by Messrs. Hinde Brothers, of 1a City Road, London, and Birmingham, in the manufacture of their new patented hair brushes. These are a true novelty and deserve attention both for their intrinsic value and on account of the fact that they create a use for an important native product hitherto thrown away.

Until the somewhat recent introduction of metallic brushes hair brushes were always made of bristles, and these are invariably obtained from hogs, these animals not being uniformly covered with bristles of the same strength and length like fur-skinned animals, but having a stronger growth on the head and spine. For the supply of bristles makers have depended chiefly on European sources, the softer kinds coming from France and the south, and the stiffer kinds from the north, the stiffest being from Siberia. Somewhat recently America has found methods of treating the soft woolly hairs of its pigs, and dressing them so as to be available for brush-makers' use in various ways; the strength, however, of the

hairs, or soft bristles, not being suitable for hair brushes. But it has fallen to India to supply the stiffest of bristles, mostly of a jetty blackness, great length, and unequalled strength. These bristles have of late been brought into the English market, and one wonders at the wealth that has hitherto been allowed to lie rotting in the jungle, where the boars have shed their coats, and at the neglect of the local butcher in allowing so valuable a product to be wasted when dealing with his skins.

The intense stiffness of these bristles has suggested Messrs. Hinde's invention. The great aim of hair-brush makers has always been to acquire, at the lowest possible cost, what is known as "penetration," i.e., the penetrating of the brush through the hair of the head rather than the smoothing over the top of it. It may be fairly said that not one out of a hundred of the hair brushes sold at the present day has the necessary "penetration," and, in fact, except at a high price, it is difficult to obtain anything but a smoothing instrument, and frequently the most costly hair brush is quite ineffective for going through the hair, or arranging any but the silkiest of tresses. Often this defect is attributable to the clumsiness of construction and the density of the tufts of bristle. Under Messrs. Hinde's invention, by the abolition of $\frac{1}{20}$ of the bristles used, the difficulty has been surmounted and perfect "penetration" achieved. The presence of the $\frac{1}{20}$ of bristles, which has now been done away with, was the reason why the other $\frac{1}{20}$ was comparatively inoperative. In this brush single bristles, of this peculiar Indian growth, are set individually in a flexible air pad, which, being connected with an ordinary hair-brush stock, forms, in the simplest possible manner, a light, graceful, effective instrument for cleansing and arranging the hair, while its thorough penetrating powers effect that pleasant and beneficial sensation to the scalp which has hitherto been procurable alone from the use of a very expensive brush. Along with this invention the proprietors have produced a very handy additional "notion"—an oval leatherette sheath, made to fit the brushing part of the article, which is supplied with each, and will do good service in protecting the brush from dust.

EDINBURGH INTERNATIONAL EXHIBITION OF INDUSTRY, SCIENCE AND ART.

(Second Notice.)

MESSRS. BURROUGHS, WELLCOME & CO., in a small but well-arranged case, show examples of their specialities, prominent among which are Hazeline, Kepler extract of malt, plain and with cod-liver oil, beef and iron wine, compressed tablets, and tabloids. The "Gordon" pocket medicine-chest and "Colonial" medicine-chest, which they also exhibit, seem well adapted to the purposes for which their names would indicate them to have been designed.

Messrs. Seabury & Johnson have a large show of their various plasters, such as mercurial, capsicum, &c. Their mustard plasters are very neatly put up. To their activity we can testify from the experience of an unwilling experiment. Iodoform gauze, antiseptic gauze, with eucalyptus, and several antiseptic dressings are put up in very portable form. Their range of corn plasters seems exhaustive of the popular shapes.

Mr. D. N. Wylie, Edinburgh, has a case which we fear is not free from the suspicion of a shop-window; as such, however, it might be regarded as somewhat successful. The principal articles shown are insect powder, hair dye, corn cure, and golden hair fluid. Suspended in the case are switches of hair showing the effects of the dye and golden fluid.

Messrs. F. C. Calvert & Co., in a somewhat badly arranged case, appeal both to the public and the trade by a show of their various carbolic acids and disinfecting powders. Sulpho-carbolates are strongly represented, and the various adaptations of carbolic acid for toilet purposes are prominently displayed. Their carbolic medical soap in small cakes for physicians' use is a recent introduction and very convenient.

Messrs. W. J. Bush & Co., whose stand has only just been completed, show specimens of their various essences for the preparation of aerated beverages of a non-alcoholic nature. In this department they seem to keep up with the demands

of the times. We notice one of the specialities is "Essence Blue Ribbon Ale." It makes one quite thirsty to walk round this case and read the tempting names on the attractively got-up bottles. The enterprising maker of coffee extract who, in the adjoining stall, dispenses free sample cups of his preparation must find his proximity to Messrs. Bush's stand favourable to frequent demands on his hospitality.

Messrs. Bush also show granular preparations such as Elf. Fullna, Carrara, and some other popular salines. Their case is very well arranged, and its appearance as a whole is exceedingly attractive.

Messrs. Dundas Dick & Co., of New York, have a display of gelloid capsules, empty, for use in the administration of nauseous medicines. These capsules are in two pieces, one piece fitting on to the other. For powders they would, we should say, be useful, and the larger sizes would be admirable for capsuling horse-balls. They are not new, but they do not yet seem to gain acceptance in this country. Mr. Dundas Dick, we understand, was at one time an assistant in one of our Edinburgh wholesale houses.

Mr. R. P. Linton, pharmaceutical chemist, Edinburgh, shows in Class IV. specimens of gums, resins, varnishes, and various vegetable oils. He is also an exhibitor in Class V., where he displays "Improved writing and copying inks." These do not call for any special remarks.

Mr. Samuel Purves, chemist, Edinburgh, exhibits in Class XII.—Educational Appliances—microscopic preparations of pharmaceutical and physiological interest. This is a most interesting exhibit. There are over forty dozen slides arranged in five sections: pharmaceutical, physiological, polariscope, pollen, and wood sections. In the pharmaceutical section nearly, if not quite, all the B.P. vegetable materia medica is represented, the series beginning with amygdala and ending with zingiber, and including cinchona, ipecacuanha, nux vomica, and physostigmine. The polariscope slides include alum, cinchonine, cinchonidine, quinine, soda and potash salts, strychnine, zinc sulphate, &c. Sections of brain, skin, lung, liver, &c., are to be found among the physiological slides, and these specimens are stained. Pollen is shown from aconite, belladonna, digitalis, lily of the Nile, wild rose, vegetable marrow, and a great many other plants, some rare, others well known. The wood sections are very interesting, and comprise acacia, ash, beech, boxwood, oak, willow, &c. Altogether Mr. Purves's exhibit well deserves a visit. It represents a vast amount of industry and manipulative skill.

Messrs. Carr, of Berwick-on-Tweed, have an excellent exhibit of cod-liver oil. There are shown samples of oil obtained from the livers of cod caught on the coasts of Norway, Newfoundland, and Scotland in the vicinity of Berwick. There is also a fine specimen of skate-liver oil, which indicates very careful manufacture, for we are aware from what we know of this oil that to obtain it in proper condition for medicinal use it requires even more care than cod-liver oil. We learn that occasional inquiry is made for it for medicinal use, and where the prejudice attaching to its name is overcome it is much liked as a substitute for the product from the cod. The oil has a bright orange colour and is very attractive in appearance. The taste we consider is less objectionable than that of cod-liver oil. The supply would be practically unlimited, as skate are very plentiful and their livers are rich in oil. On this stand an open bottle of oil with a glass beside it invites the visitor to taste the contents, and a visitors' book is open to receive the taster's autograph.

Messrs. J. Forbes & Co., Wick, show a case of their "Premier" cod-liver oil. A portrait of the Grand Old Man embellishes the label, and presumably supplies the designation "Premier." This exhibit is a little wanting in variety.

The Normal Company exhibits cod-liver oil, skate-liver oil, and turbot-liver oil. The cod-liver oil is made from livers of fish caught on the Scottish coast. The skate-liver oil shown does not appear to be specially prepared for medicinal use, and on inquiry we find it is chiefly used by leather manufacturers. The oil from turbot livers is shown only as a specimen of what the oil is like, as it is not manufactured in quantity to put on the market. In colour it is a dark red. This company make an extract of meat from whale flesh, which by the taste is not discernible from ext. carnis Liebig. An extract from fish which they also make is almost identical, but that a faint flavour of fish is perceptible. These preparations we understand have not yet been introduced on a commercial scale, but there is prospect of their being so.

PHARMACY IN CANADA.

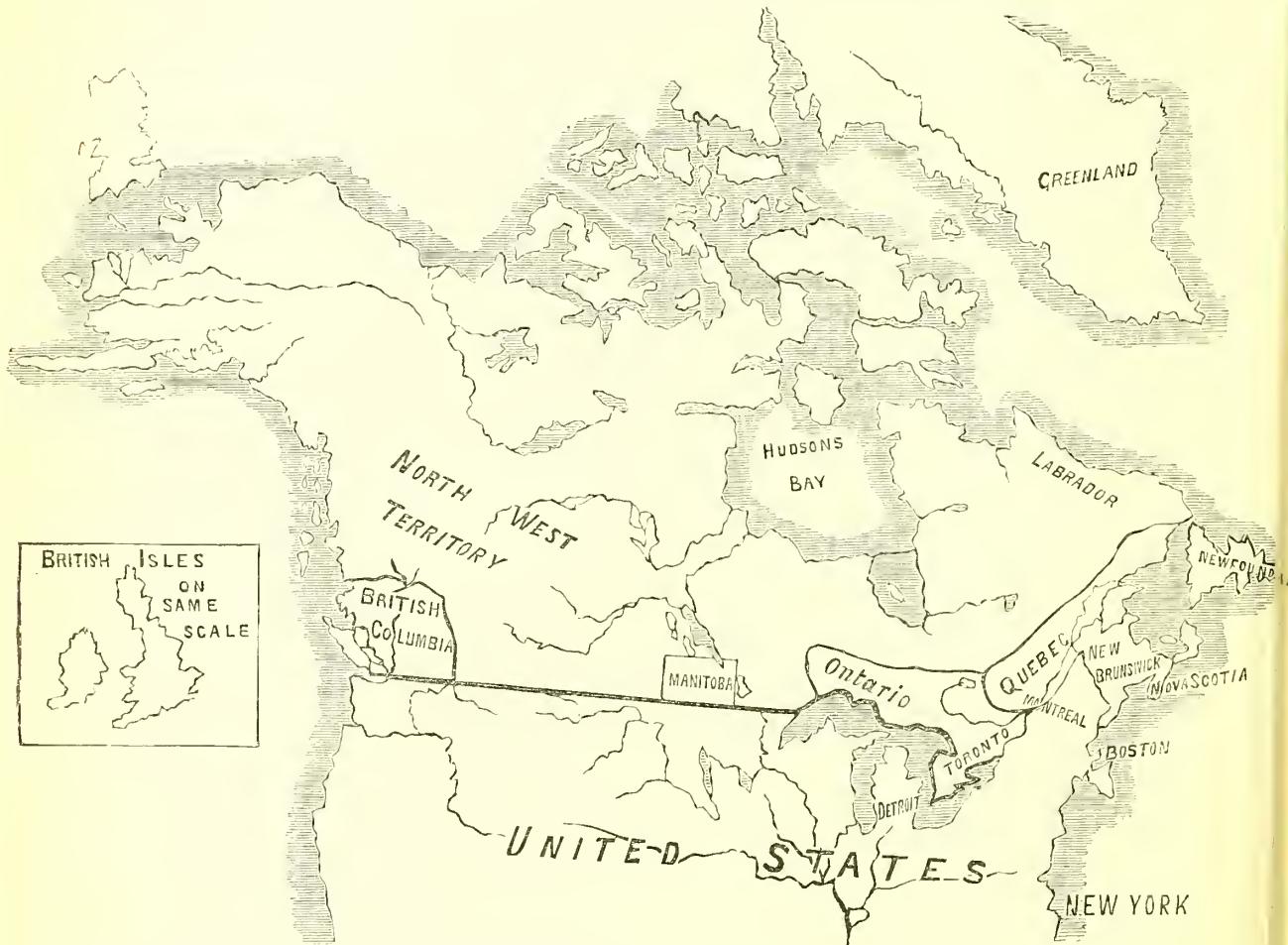
BY ALFRED H. MASON, F.C.S.*

THE Dominion of Canada includes the various Provinces of North America, known as Quebec, Ontario, New Brunswick, Nova Scotia, Prince Edward Island, Manitoba, and the North-West Territory, and British Columbia—in fact the whole area of British North America except Newfoundland. This territory, about as large as Europe, stretches from the Atlantic to the Pacific Ocean, and (including Newfoundland) is estimated to contain a total area of 3,620,510 square miles: total population estimated at about 4,800,000.

The condition of pharmacy in the Dominion compares favourably with that of any other country, as far as my observation goes, and most favourably with that of the

to take out a licence from the Governor, after having passed an examination before a properly appointed Board. In 1864 this was annulled, and the power of confirming licences given to the Provincial Board of the College of Physicians and Surgeons, 27 & 28 Vict. ch. 5. The body gave very little attention to the matter beyond pocketing the fees of those who chose to present themselves before them for examination.

Those who chose to set up as pharmacists without going through the formality of an examination were at liberty to do so. An instance on record is that of a tavern-keeper in Quebec, who sold out his bar, delivered it over to his successor on Saturday night, and on the following Monday assumed the rôle of pharmacist without having acquired any knowledge of the duties of a druggist other than that generally to be obtained by following the calling of bartender. The examination to which the candidates were subjected was of the most formal and elementary nature.



mother country, from whence many of Canada's best pharmacists come.

QUEBEC.

The Province of Quebec, with a population of 1,360,000, and covering an area of 188,688 square miles, has a Pharmaceutical Association, an Act of Parliament called the Quebec Pharmacy Act, and colleges of pharmacy at Quebec and Montreal. Quebec is the capital of the Province and the great seaport town of Canada, and Montreal the principal city, with a rapidly increasing population (about 180,000), and situate at the confluence of the Ottawa and St. Lawrence rivers. These two cities are the great centres of distribution of produce to Great Britain and the States.

The first legislative enactment in Canada concerning pharmacy is 28 Geo. III. ch. 8, sec. 1, which obliged pharmacists

The intelligent pharmacists of the Province were far from satisfied with the manner in which the Board of Physicians performed their duties. In Montreal, where they were more numerous than in any other part of the Province, they formed themselves into the Montreal Chemists' Association, organised a school of pharmacy, which they called the Montreal College of Pharmacy, and this college from very small beginnings has fifty students attending the classes during the present session.

This association agitated for the control of the examining and licensing power, became incorporated in 1870 under the title of the Pharmaceutical Association of the Province of Quebec, and examined candidates and granted licences to those who *voluntarily* presented themselves. But previous to 1875 they had no power to compel those who wished to open drug stores to submit to such examination, owing to the determined opposition of the medical faculty. In that year, however, they obtained the necessary power in an amended

* This paper is the substance of a lecture delivered by Mr. Mason to the Liverpool Chemists' Association during a recent visit to England.

Act, called the Pharmacy Act of 1875, in which a prescribed curriculum was made compulsory. This Act provided for Preliminary, Minor, and Major examinations without recognising any existing rights. No person was admitted to practise pharmacy who had not passed the Major or Final examination, which conferred the title of licentiate in pharmacy; passing the Preliminary examination admitted as "certified apprentice," the Minor as "certified clerk." But although this Act made all due provision for the public safety, it afforded comparatively little protection to the pharmacist as a *quid pro quo*, for the time and study expended in preparation for examinations.

In 1885, however, a consolidated and amended statute was obtained, which with certain exceptions limited the sale and compounding of drugs or poisons to regular licentiates of pharmacy and physicians.

The regulations of the Board of Examiners for the Preliminary examination are, that the candidate shall possess a knowledge of the English, French, and Latin languages, the first four rules of arithmetic, vulgar fractions and decimals, and a general acquaintance with history and geography. He is also required to produce evidence of good moral character.

In the Minor examination the candidate is required to read written prescriptions, translate them into English, write at full length all abbreviated words in a neat and distinct hand, detect unusual doses, prepare the medicines in the presence of the examiner, and properly label and direct each bottle or packet; to recognise the preparations of the British Pharmacopœia which are not of definite chemical nature, such as extracts, tinctures, simple and compound powders, &c., to describe the composition of such as are compound, and give the proportion of the active ingredients, also the doses of all official preparations; to recognise specimens of roots, barks, leaves, fruits, juices, &c., used in medicine, and name the official preparations into which they enter; to possess a knowledge of the laws of chemical combination, the nature and properties of the chemical elements and their compounds, and to recognise the acids, oxides, salts, and other definite chemical bodies of the British Pharmacopœia and to give their doses. Candidates for the Minor examination have to produce evidence of having served as apprentices for at least three years, and of having been duly registered for that period.

For the Major examination for "Licentiates in Pharmacy," the candidate is required to possess a more extended knowledge of *materia medica* and chemistry than is required for the Minor examination: to describe the processes by which the acids, oxides, salts, and other definite chemical compounds of the British Pharmacopœia are produced, and to explain the decompositions that occur in their productions and admixture, by written equations and diagrams; to recognise the more important medicinal plants, also to possess a knowledge of their elementary structure; also the structure and distinctive character of roots, stems, leaves, and flowers; and to name the antidotes to be administered in cases of emergency for the more ordinarily occurring poisons. The candidate is further required to produce evidence that he has served at least four years under a duly registered Licentiate of Pharmacy; has attended two courses of lectures on *materia medica*, two courses on chemistry, and one course on botany, has passed the Minor examination, and has attained the age of twenty-one years.

The examination fees paid by the candidates are for the Preliminary \$2.00 (8s.), for the Minor \$5.00 (20s.), and for the Major \$10.00 (40s.), this is in addition to the annual registration fee, which for a certified apprentice is \$2.00 (8s.), for a certified clerk \$5.00 (20s.), and for a Licentiate in Pharmacy \$10.00 (40s.). If unsuccessful in the first examination, a candidate may again present himself, but only half the usual fee will be required.

The following is the list of scheduled poisons:—Aconite and its preparations; arsenic and its preparations; cantharides, corrosive sublimate; cyanide of potassium and all metallic cyanides; ergot of rye and its preparations; essential oil of almonds, unless deprived of prussic acid; opium and its preparations, except paregoric and syrup of poppies; prussic acid; savin and its oil; strychnine and all poisonous vegetable alkaloids and their salts; tartar emetic.

The following is the scheduled list of medicines which may be sold by others than Licentiates in Pharmacy, provided that patent medicines be sold without their wrappers being

opened, and the other medicines be sold in closed packets properly labelled:—

All patent medicines; alum; bicarbonate of soda; borax; camomile; crude carbolic acid; carbolate of lime; castor oil; cochineal; cod-liver oil; cream of tartar; Epsom salts; ginger; glycine; gum arabic; hops; linseed; linseed meal; manna; nitre; Paris green; poppies; rhubarb; senna; sulphur; tartaric acid.

The Quebec Pharmaceutical Association does not hold meetings at regular intervals for reading papers, &c., but simply controls the affairs of the Montreal College of Pharmacy—appointing lecturers, examiners, &c. It possesses a museum in which are a large number of crude drugs and chemicals, a very valuable collection of Canadian mineralogical and geological specimens, and a fine collection of photographs of botanical specimens. The lecture room accommodates forty students, with every convenience for experiment, &c., in practical chemistry.

There has recently been formed a Pharmacy Students' Association, and at its monthly meetings papers are read and discussions follow—this promises to be a very valuable adjunct to the interests of pharmacy.

ONTARIO.

The Province of Ontario, with an area of 101,733 square miles, and a population of about 2,000,000, perhaps takes the most important position in pharmaceutical affairs, having a most efficient organisation, with head quarters in Toronto. This arises from the fact that by far the larger portion of the English population reside in this province, and also that the requirements of the College are not so stringent as those of Quebec; moreover the facilities the French medical universities provide for qualification give many medical men in that province the privilege of keeping drug stores.

The principal cities of Ontario are Toronto, capital of the province (population say 97,000), Hamilton (36,000), Ottawa, the seat of the Dominion Government (28,000), London (20,000), and Kingston (14,000).

Early in 1867 the Medical Council of Canada sought by means of a proposed Bill to compel druggists to pass an examination as to their qualifications before a board composed exclusively of physicians. Aroused by this attempted infringement of liberty, some thirteen druggists formed themselves into an association called the Toronto Chemists and Druggists' Association. Meetings were held and a considerable number of Toronto druggists became members. It was thought better to enlarge the area of membership and change the title to the Canadian Pharmaceutical Society when the Ottawa druggists sent in their adherence. About this time Mr. Shuttleworth conceived the idea of publishing a journal, and in carrying out this plan received much assistance from Mr. R. W. Elliott. The prospectus of the journal was issued in April, 1868, and in three months nearly all the druggists in the Province had attached themselves to the society.

A Draft Pharmacy Bill for the Dominion was made out, and the society received assurances from the Premier, then Mr. J. A. Macdonald, that it would become law. Political somersaults, however, defeated this project.

In February, 1871, a Pharmacy Act was obtained from the Government of Ontario incorporating the College and changing the title to that of the Ontario College of Pharmacy. The journal then from a private enterprise became the property of the College, and Mr. Shuttleworth was appointed editor. The number of members at this time was 619.

In April, 1882, the teaching college was instituted, though this was not the first attempt of the kind, private classes having been conducted by Mr. Shuttleworth as early as 1867 under the auspices of the old society.

The Amendments to the Act were assented to in March, 1884, when the old Act was repealed, and the present law instituted. This only requires one examination to be passed by students before qualifying to open drug stores, but before apprenticeship a youth is required to furnish to the Registrar of the College a certificate or other evidence satisfactory to the Council showing that prior to the commencement of such apprenticeship he has passed an examination entitling him to admission to a high school, college, collegiate institute, or to the fourth form of a school for the Province of Ontario. Upon receipt of such evidence the Registrar enters the name upon the roll of registered chemists and druggists, and the

apprentice becomes a member of the College. The Board of Examiners require candidates for certificates as pharmaceutical chemists to pass an examination in the following subjects:—Chemistry.—To recognise the ordinary chemicals used in medicine; to possess a practical knowledge of the processes by which they are produced, the composition of such as are compound, and to explain the decompositions that occur in their production and admixture, by equations or diagrams; to know how to determine, by means of tests, the presence in solution of the chemicals in common use, and to explain the reactions which occur in each case; to possess a general knowledge of the laws of chemical philosophy, and a practical knowledge of the means of determining specific gravities, densities, and temperature, and of the instruments appertaining thereto, and the physical and chemical constitution of the atmosphere. Pharmacy.—To recognise the preparations of the Pharmacopœia which are not of definite chemical nature, and have well-marked physical characters, such as extracts, tinctures, powders, &c.; to give the proportions of the active ingredients, and to possess a practical knowledge of the processes, and the principles of the processes, by which they are made, and of the best excipients and methods of manipulation for forming emulsions, pills, &c. Materia Medica.—To recognise specimens of roots, barks, leaves, fruits, resins, gums, animal substances, &c., used in medicine; to give the botanical and zoological names of plants, &c., yielding them, and the natural families to which they belong; to name the countries and sources from which they are obtained, the officinal preparations into which they enter, and to judge the quality and freedom from adulteration of specimens. Botany.—To recognise the more important indigenous plants used in medicine; to possess a general knowledge of the elementary structure of plants, and the structure and distinctive characters of roots, stems, leaves, and their parts; to name and describe the various parts of the flower. Prescriptions.—The candidate is required to read, without abbreviation, autograph prescriptions, translate them into English, and render a literal as well as an appropriate translation of the directions for use; to detect errors, discover unusual doses, and have a general knowledge of posology; and to render, in good Latin, ordinary prescriptions written in English. Practical Dispensing.—To weigh, measure, and compound medicines; write the directions in concise language in a neat and distinct hand, to finish and properly direct each package. The examination fee is £4 00 (16s.), registration fee £10.00 (40s.), annual subscription £4.00 (16s.). If a pharmacist has more than one store, he has to pay the annual subscription for each.

From a beginning of 13 members the present College has grown to its present proportions, numbering on its books 665 members who have passed the prescribed examinations and been registered. The number of members admitted under privileges at the time of the passing of the Act was 345, making a total of 1,630 names on the register. At the first examination of the College 3 candidates presented themselves, now they average 60 each half year.

The poison schedule is as under. Those enumerated in Part I. must be labelled by wholesale dealers, as well as by retailers, "Poison," with the name and address of the seller; and when sold by retail must be supplied only to persons known to the seller, or introduced by persons known to the seller, and must be duly entered in a book kept for the purpose, and according to the form set out in the Act.

Poison Schedule (a):—

Part I.—Acid hydrocyanic (Prussic);aconite and compounds thereof; antimony, tartrate of; arsenic, and all the compounds thereof; atropine; conia and compounds thereof; corrosive sublimate; digitaline; ergot; Indian hemp; morphia, and its salts and solutions; oil cedar; strychnine and nux vomica; savin and preparations of; veratrine.

Part II.—Oxalic acid; belladonna and the compounds thereof; calabar beans; cantharides; carbolic acid; chloral hydrate; chloroform and ether; conium and the preparations thereof; croton oil and seeds; cyanide of potassium; euphorbium; elaterium; Goulear's extract; hyoscyamus and preparations; hellebore; iodine; opium, with its preparations, including laudanum, &c., but not paregoric; pink root; podophyllin; potassic iodide; potassic bromide; St. Ignatius beans; santonine; scammony; stramonium and preparations; valerian; verdigris; sulphate of zinc.

There are about 700 druggists in business in this province, of which about 70 are established in Toronto.

The association are just completing the erection of a magnificent College of Pharmacy in St. James's Square, Toronto, at a cost of \$20,000, where every facility will be afforded to students and professors in an advanced and liberal manner. In this enterprise they rather place pharmacists in the mother country at a disadvantage.

(*To be continued.*)

Foreign and Colonial.

DR. R. HIRZEL, Extraordinary Professor of Pharmacy in Leipsic, has accepted an appointment at Jena.

NITRATE OF SODA.—The Chilean mineowners held a meeting at Iquique on May 3, at which it was resolved to prolong until March 1887 the agreement limiting production.

DEATH OF A PROFESSOR FROM BURNING ETHER.—Dr. D. J. Barnet, one of the Professors of the Faculty of Pharmacy in the Cuban Royal University of Havana, has just died, in consequence of burns received during an accidental conflagration of some ether in his laboratory.

ADELAIDE EXHIBITION.—The opening day of the Adelaide International Jubilee Exhibition is fixed for June 20, 1887, on which date Queen Victoria will complete the fiftieth year of her reign. The latest day of entry is January 1, 1887. For space above 20 feet 1s. per foot is charged for ground space and 6d. for wall space.

THE PRODUCTION OF QUICKSILVER in the Almaden mines in Spain was 46,739 bottles in 1885, 43,099 bottles in 1884, 46,143 bottles in 1883, and 46,591 bottles in 1882. During the four summer months working is always suspended. The Spanish ore contains an average of 10 per cent. mercury, the Californian ore only 2 per cent.

AN EARNEST DISCIPLE.—A Mr. Paul von Ritter, an ardent adherent of the Darwinian theory, who recently died at Basle, has left to the University of Jena a legacy of 300,000 marks (15,000L), the interest of which is to be devoted to the promotion of the doctrine of evolution. The legacy is under the control of the Professor of Zoology for the time being.

NEW FIRMS.—*Hoffmann & Schinke*, Thurmstrasse, Berlin, drugs and dyestuffs; *Carl Hotze*, Christburg (Germany), drugs; *Adolf Lueckenow*, Dramburg (Germany), drugs; *Gustav Appell*, Cassel, drugs; *A. Moll*, Vienna, drugs; *Siegfried Pels*, Hamburg, commission agent in chemicals, &c.

The firm of *A. Kuehlein & Co.*, chemical manufacturers, Berlin, have dissolved partnership.

BRITISH JEALOUSY.—A German exporter of homœopathic remedies, Dr. W. Schwabe of Leipzig, has issued a public notice warning his countrymen of the loss which may accrue to them from the reckless manner in which German goods for abroad are handled by British carriers in transit and by our customs officers. Dr. Schwabe instances a shipment made by himself from Calcutta to Australia, which was so carelessly handled at the custom-house (in Australia?) as to cause him a loss of several thousand marks. This reckless treatment of German goods is ascribed to jealousy of German competition.

THE CONSUMPTION OF JAPAN WAX IN AMERICA is rapidly increasing, and new uses are constantly found for it. It is preferred to any other wax at the Government armouries for greasing purposes; it enters largely into the manufacture of confectionery, and for laundry purposes every Chinaman is sure to have his native wax perform the necessary work instead of beeswax, but the latter has not been altogether displaced in the large laundry establishments. Leather and soap manufacturers also have a preference for Japan wax, and it is said that the article forms a part of all the wax paper placed upon the market, and that it is used in making varnish. The melting point is said to be against Japan wax for manufacturing American candles, and the price being higher than paraffin that would be another point against its use for this purpose. The competition of paraffin wax has also limited the consumption of the foreign article in waxing floors.

Medical Gleanings.

PRURITUS ANI.

FOR the intolerable itching which accompanies this complaint correspondents of the *Medical and Surgical Reporter* give the following hints. Dr. J. B. Johnson says these local manifestations of disease usually owe their origin in part to derangement of the general system, and any indication in this respect should be attended to at once. If the patient's tongue is furred, he should have 5 grains of calomel or 5 grains of blue pill once or twice a week, for a week or two, followed by a saline purgative the morning after the mercurial dose, and take for a few weeks (with or without the addition of 5 drops of Fowler's solution with each dose) the following alterative:—

Potass'i iodidi ..	..	..	..	..	5ij.
Aqua destillata ..	..	..	..	..	3vj.
Ext. quassiae fluid ..	..	..	..	..	3ss.

Sig.—Shake well. *Dose*.—A tablespoonful after each meal.

The local treatment should be commenced by the institution of the most perfect cleanliness. The patient should be instructed to wash well with a cloth and cold water after each action of the bowels, and then to bathe the part with the following wash:—

Hyposulphite of soda ..	..	..	..	..	3ss.
Carlolic acid ..	..	..	..	..	9ij.
Water ..	..	..	..	..	3iv.
Glycerine ..	..	..	..	..	5ij.

Mix.

Dr. Johnson also recommends the application of dry iodoform at bed-time.

Dr. J. W. C. O'Neal advises to wash locally night and morning with a solution of borax 5j to a pint of hot water, with a sponge, and apply with a camel's-hair pencil continuously for three minutes the following:—

Solidi bicarbonatis ..	..	..	..	..	3ij.
Acidi carbolic ..	..	..	..	..	gr. xxx.
Glycerini ..	..	..	..	..	3ij.

Mix, bottle, and fasten a camel's-hair pencil by means of a cork-cutter in the cork, and apply the mixture thoroughly and continuously each night and morning to the itching parts, until relief is produced.

Dr. J. C. Cotton's method is to anoint the part freely with an unguent composed of citrine ointment, 1; cosmoline, 3; then apply as much dry calomel as can be made to adhere by rubbing. Repeat this process once daily for a week, when the cure will be complete. The same treatment is equally efficacious in "pruritus vulvae," as well as chronic eczema, and some other cutaneous affections. The amount of citrine ointment must vary with the indications in each case.

THE THERAPEUTICS OF BITTER MEDICINES.

ACCORDING to the *Lancet* Dr. Cheltsoff, as the result of experiments with various bitters, has arrived at the conclusion that they are absolutely injurious rather than beneficial in stimulating the secretion of gastric juice. It is well known that many bitters, such as chiretta, gentian, and quassia are administered for the sake of the temporary stimulus which they are supposed to impart to the peptic glands; they are given, in short, as appetisers. According to Dr. Cheltsoff certain bitters—calumba, cascarilla, gentian, and quassia amongst the number—in small doses interfere with artificial gastric digestion, and to a smaller extent with natural digestion. Large doses diminish the secretion of gastric juice, and though small doses temporarily increase the flow from the peptic glands, the juice itself is of diminished power. The pancreatic digestion is retarded rather than aided, and, generally, the influence of bitters on the whole of the digestive tract is hurtful rather than beneficial. It is to be noted that the teaching of experience does not quite coincide with the results of Dr. Cheltsoff's experimental investigation. There are cases in which bitter tonics are highly beneficial, yet it is undeniable that there are also conditions of the stomach in which they positively do harm. Dr. Cheltsoff's results may help to draw attention to the

indiscriminate prescribing of bitter infusions and tinctures as vehicles for metallic medicines.

RESORCIN IN WHOOPING COUGH.

IN the course of a long and interesting paper on the nature of whooping cough, by Dr. William H. Barlow, which has just been concluded in the *Lancet*, attention is drawn to a method of treatment which has been introduced by Professor Moncorvo, of Rio de Janeiro, which consists of the application of resorcin. The resorcin should be pure, and is employed in aqueous solution. The first applications, which are made by means of a large camel hair pencil, or a swab, to the supra-glottic portion of the pharyngeal lining, to the opening of the glottis and the pharynx, generally increase the violence of the chinks and their number; but that soon subsides, and in the course of one, two, or three days, the patient tolerates the application, and the chinks rapidly decrease in number. It is applied at intervals of two hours, both night and day, unless the patient is asleep. Moncorvo has had excellent results by this method of treatment, and Dr. Barlow finds in his own experience that in 50 cases under resorcin, the average duration of treatment was only 5½ weeks, and 8 weeks for the average duration of the disease; and, moreover, there was no death amongst the fifty cases. The remedy acts as a parasiticide, it being believed that whooping cough is one of the diseases which are caused by the irritation excited by the presence of parasites; and that it is due to the presence of micrococci, which proliferate in large numbers upon the lining membrane of the larynx and pharynx, and which infiltrate the epithelial cells, which seem to be the preferential seat of their growth and increase.

FLUORIDES OF AMMONIA AND IRON.

DR. JOHN LUCAS, of Bombay, has employed the fluoride of ammonia in the treatment of hypertrophy of the spleen. The drug appears to have antipyretic and antiperiodic properties, as proved in cases of ague. Nausea was produced at first, but afterwards large doses could be borne. The appetite after a time improves under its use. By giving the drug after meals its nauseant and purgative actions are greatly lessened. "It certainly appears to possess the merit of excelling any other method of treatment of hypertrophied spleen with which we are acquainted." Dr. Lucas began with five-minim doses, but in future would be disposed to give twenty, or even thirty, minims well diluted. The fluoride of iron would, perhaps, be preferable to the ammonia salt, on account of its haematinic properties.—*Lancet*.

TREATMENT OF ACUTE RHEUMATISM.

THE *Lancet* states that Dr. L. Grinevitski, of Rostoff-on-the-Don, has treated acute articular rheumatism for more than twenty years with nitrate of potash, 2 drachms being given daily in raspberry syrup, doses being every two hours. Together with this he prescribes an ointment for use morning and evening of the following composition: Olei hyosc., 1 oz.; ung. hydrarg. cinerici, 2 dr.; ext. acon., 1 dr. He finds that on the whole this plan of treatment is more satisfactory than any other, being especially valuable in those cases where salicylates fail to give relief. Generally the disease is brought to an end in from one to two weeks, according to its severity and the time the treatment was commenced. When commenced at the onset of the attack, and before more than one joint was affected, the others were usually spared altogether. This is certainly an old-fashioned method of treatment.

BRONZING OF THE SKIN BY ARSENIC.

Dr. Owen (Manchester) has recently shown a patient (a girl of ten) who presented marked bronzing of the skin, as the result of a month's treatment with *liquor arsenicalis*, 15 minims daily, for chorea. The discoloration was first noticed on the trunk, and then extended to the legs and arms, and lastly to the eyelids. When the arsenic was stopped the discolouration gradually disappeared. It was pointed out that the bronzing resembled that of Addison's disease, but that the case had none of the marked symptoms of that affection. Assuming that the arsenious acid was free from metallic impurities, it would appear that the bronzing was due to deposition of metallic arsenium in the cuticle. This is a very rare phenomenon.—*Brit. Med. Journ.*

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EDITORIAL NOTES.

THE NEW COUNCIL.

THE recent election, though it manifested quite the usual proportion of indifference among the members of the Society, was not without indications of something more than merely mechanical voting on the part of those who were sufficiently interested in the selection of representatives to send in their voting-papers. The fact that Messrs. Symes and Schacht secured the first and second place on the poll might fairly be quoted by the advocates of a compulsory curriculum as an endorsement of their views; but it is quite as likely that the favour shown to these gentlemen was an approving recognition of their militant tendencies in a council which has been singularly obedient to the will of its chief. Mr. Alfred Southall took a remarkably high position for a new candidate, and as he has never been personally prominent in pharmaceutical politics, his success must be largely credited to the general faithfulness of the Midland voters, and to the universal respect of the country for a deservedly-honoured name. Mr. Southall has, however, a high reputation among his acquaintances for business tact and vigour, and will, we doubt not, justify the 1,075 votes recorded in his favour. Not much signification can be attached to the graduated scale by which we descend on the pharmaceutical thermometer from Mr. Greenish to Mr. Allen, though till next year it must be recognised that according to the figures the votes of the former are heavier than those of the latter in the proportion of 5 to 4. It will be convenient to assume that Mr. Cross dispossesses Mr. Squire, and that Mr. Baildon replaces Mr. Young. Both of these results are proof that there is after all a live Nemesis watching the affairs of pharmacy. Mr. Squire is evidently punished for his irregular attendance at the Council meetings of the past year, and Mr. Young falls on a distinct issue which has been raised, and on which he and Mr. Baildon were singled out as the respective cham-

pions of the opposing views. The difference of 24 votes which represents them, and which happening where it does, brings the one in and puts the other out of the Council, is not the full measure of the expression of sympathy with the Scottish complaint; because, other things being equal there is always a solid vote cast for the established members of Council. Mr. Young's defeat is a testimony to his honour. He deliberately chose to risk a safe seat by supporting the side which he must have known was likely to be unpopular with his friends, but which seemed to him to be right; and though we are glad to see votes given with some definite reason we part with him with regret. The election of the chief officer of the Trade Association shows that that body still commands an effective influence.

The first duty of the new Council, that of selecting its President, is a delicate and a difficult one. The schemes with which Mr. Carteighe has linked his name have been so uniformly unsuccessful, and the policy of secret discussion and negotiation which appears to please him is, we believe, so generally distasteful, that, according to all the rules of the game, he ought to be deposed from the presidency. But, on the other hand, he has given so much time to the Society's affairs, he has such a complete acquaintance with its various businesses, and in conducting these he has displayed so much ability, and at the same time such devoted faithfulness to the interests of the Society, if not of the trade generally, that it is hardly conceivable that his services as President will be dispensed with at present, if he is willing to still give them.

GRAIN WEIGHTS.

THE paper read by Mr. Maxwell Blews at the meeting of the British Association of Inspectors of Weights and Measures held last Monday at Warrington, a report of which we are able to print on another page, has a particular interest for chemists. The striking fact brought out by Mr. Blews is that of 294 weights, ranging from $\frac{1}{2}$ grain to 6 grains, which had all been examined and stamped by a duly authorised inspector of weights and measures, 282 were found more or less incorrect when re-tested with extreme care. Mr. Blews says the inspector who stamped the weights is not to blame; in dealing with such weights he cannot be rigidly accurate, because the authorities do not provide him with balances adequate to the work. Now balances "adequate to the work" to be supplied to each inspector means a very large expenditure; and we hardly think the end to be gained would justify it. Mr. Blews has kindly furnished us with the records of some of the re-examinations of the weights referred to in his paper. Taking the 84 weights tested by the Standards Department of the Board of Trade, we find the worst inaccuracy among twelve 6-grain weights to be that two are $\frac{1}{12}$ th of a grain too much; of twelve 5-grain weights, one is $\frac{1}{8}$ th of a grain too much, and three are $\frac{1}{12}$ th of a grain too much; of twelve 4-grain weights, one is $\frac{1}{8}$ th of a grain too light, and there are three $\frac{1}{12}$ th of a grain too light; of twelve 3-grain weights there is one that is $\frac{1}{12}$ th of a grain too heavy; in the twelve 2-grain weights there are three cases of error amounting to about $\frac{1}{8}$ th of a grain; in the twelve 1-grain weights the worst error is one of $\frac{1}{20}$ th of a grain too little; and in twelve $\frac{1}{2}$ -grain weights there is one wrong by $\frac{1}{12}$ th of a grain, and three to the extent of $\frac{1}{2}$ th of a grain.

While we think Mr. Blews is to be thanked for directing attention to the subject, we do not think his statement justifies any alarm. He shows that the ordinary dispensing scales, which were probably what were used by the first inspector, cannot be perfectly relied on in weighing half-grains. It is not possible to conceive of any danger from

the use of a 6-grain weight which is erroneous to the extent of $\frac{1}{8}$ th of a grain. No prescriptions are written with such nicety of calculation as Mr. Blews suggests. Moreover, no dispenser having a prescription for half a grain of strychnine in 12 pills would trust to his dispensing scales and to his half-grain weight.

But it is to be noted that the possessor of any of the 282 weights, which though duly stamped were found incorrect, is liable to a penalty of 5/- for each. This ought not to be the case, and could hardly be enforced. Probably the best way of ensuring the absolute accuracy of these small weights would be to require that they should all be examined by an expert at Westminster. It would be much more economical to employ one official all his time than to provide all inspectors with costly balances.

THE REGISTRAR-GENERAL'S REPORT (1884).

THERE is no official report of greater interest to statisticians than the Annual Human Balance Sheet of our Registrar-General, and in some respects the Report before us, which deals with England and Wales during 1884, is more than usually interesting. The natural increase to the population during that year was 375,922, which brings up the hypothetical total to 27,132,449 persons. Marriages were fewer in 1884 than they had been for some years, and this decrease, it is interesting to note, was accompanied by a fall in the price of wheat, and of the amount, per head of population, cleared at the London Bankers' Clearing House; so that the decrease is presumably attributable to depressed trade. This influence, however, did not prevent a slightly youth of 92 re-entering the bonds of matrimony.

Deaths during the year numbered 530,828, or a proportion of 19 6 to 1,000 persons living. This is the fourth year in succession that the rate has fallen below 20, and is 2 6 lower than the average for 46 years. The Registrar-General does not say decidedly what this decrease may be due to; in part either sanitary conditions have improved the health of the community, or equally a series of mild seasons have also had a beneficial influence. There has been a decrease, practically, all round, except in zymotic diseases, which show 3,101 deaths per million, as compared with 2,639 in 1883; the source of this increase we shall refer to immediately. Of the various causes of death there are several which stand out prominently: diseases of the respiratory organs amount to 3,325 per million, and phthisis 1,818 per million, both being somewhat lower than in the preceding year. Diseases of the nervous system have caused (per million) 1,815 deaths, of the circulating system 1,499, and the only other cause, except *old age*, which nearly approaches the four figures is that which is described as diarrhoea and dysentery, which caused 973 deaths per million, as compared with 595 in 1883. This excessive mortality is explained by the comparatively high temperature of the summer of 1884, and is a fair indication of the effect of meteorological influences. Children, it is well known, are the principal victims to the summer's heat. Of the total number of deaths due to diarrhoea, namely 26,412, 17,754 were of children under one year, and 4,894 were between one and five years old, but it is infants under two years which are swept off so ruthlessly, and not until we approach second childhood do we notice marked fatality, 1,962 persons between fifty-five and seventy-five years having succumbed to bowel complaint. On former occasions we have drawn attention more particularly to the class of deaths due to violence, which includes deaths by poisoning. Violent deaths in 1884 amounted

to 17,695, or a proportion of 652 per million; 564 of this proportion was due to accident or negligence, which is the smallest proportion on record, and suicide is down for 75 per million, a rate only twice exceeded, namely in 1879 and 1880, when 80 and 77 were recorded. In this total of 17,695, poison is credited with the comparatively small proportion of 556, which shows a marked falling-off from 1883, when 639 deaths from this cause were recorded. We also find that deaths from poisoning due to accident or negligence were 310, as compared with 374 in the previous year; from suicide 241, as compared with 264; and from murder and manslaughter 6, as compared with 1 in 1883. The increase of murders by poison is remarkable; the agents used were arsenic in 3 cases, strychnine, prussic acid, and opium, one each. The 310 accidental deaths include 72 cases of lead poisoning, which should properly be excluded as not being poisoning in the ordinary sense of the term, but is due to and only manifested in special vocations. With this excluded, therefore, we find 238 deaths due to what may be called acute poisoning, and of this number 38 were due to alcohol, improper food, and such poisons as laburnum seeds and lucifer matches, none of which can properly rank as medicinal agents, so that the actual number of accidental deaths due to poisonous chemicals and drugs is only 200. On the other hand all the cases of suicidal death were due to such agents. With these explanations the following is an analysis of the statistics in order of frequency:—

Poison used	Accident	Suicide	Totals	
			scheduled	Not scheduled
Opium, Laudanum, Morphia	62	46	103	—
Soothing syrup, Cordial,				
Paregoric	4	—	4	—
Carbolic acid	30	34	—	64
Prussic acid & oil of almonds	3	22	25	—
Strychnia and Nux vomica..	5	15	20	—
Vermi-killer	1	13	14	—
Hydrochloric acid	6	15	—	21
Cyanide of potassium ..	2	17	19	—
Oxalic acid	1	18	19	—
Salt of sorrel	—	1	—	1
Chloral	9	2	11	—
Belladonna	6	2	8	—
Phosphorus piste	3	5	8	—
Sulphuric acid	6	2	—	8
Arsenie	3	4	7	—
Ammonia	6	1	—	7
Chlorodyne	6	1	—	7
Mercury	4	2	6	—
Nitric acid	1	3	—	4
Acetic and mineral acids ..	2	—	—	2
Chloroform	1	1	2	—
Soda	2	—	—	2
Copper	1	—	—	1

In addition we have twenty-seven unnamed poisons in the accident section and thirty-six in the suicides; and narcotics, Indian tincture, disinfecting fluid, washing liquor and liniment are each credited with one in the accidental. Further, chloroform and other substances used as anaesthetics have been the cause of thirty-four deaths by "suffocation." The most noteworthy features of the above table in comparison with 1883 are a decrease in deaths from laudanum by twelve, carbolic acid by thirteen, prussic and oxalic acids by five each, vermin-killer by eight, and sulphuric acid by seven, while strychnine and hydrochloric acid have each been the cause of five deaths more than in the year previous. Some of these show decrease in the suicide and an increase in the accident column; thus laudanum has twenty-six less in the accident and fourteen more in the suicide; carbolic acid ten more in the former and twenty-three less in the latter; vermin-killer has been used for suicide less by seven than in the year previous, but hydrochloric acid has been used by six more unhappy wretches. Carrying this analysis still

further we find that thirty-eight accidental deaths less were due to scheduled poisons, and six more were due to unscheduled poisons, while of the suicides there were seven more who used scheduled poisons, and twenty-eight less used unscheduled poisons, a difference due almost entirely to carbolic acid. The most striking facts about these figures are the gratifying decrease in the aggregate of deaths from poisoning, and the fact that, as a whole, scheduled poisons have been the cause of fewer accidental deaths. This is strong evidence that the provisions of the Pharmacy Act are working satisfactorily, and that chemists and druggists are doing their duty under it is evidenced by the fact that there is only one death in a quarter million from the accidental use of scheduled poisons. It is assumed by some that a corresponding lowering influence should be felt in the suicide class; but the opposite must really be the case, and as long as certain substances are labelled "poison," it is such substances that persons with suicidal intent will endeavour to use, and no law will prevent them so doing. What we maintain is that the sale of scheduled poisons is restricted to a class of traders who are particular that such poisons are sent out in proper vessels, whereas oilmen and others who sell such substances as carbolic and hydrochloric acids care not whether they send them out in a beer-bottle or a tea-cup.

THE POVERTY OF WEALTH.

FOR the striking title at the head of this note we are indebted to Dr. B. W. Richardson, who in the last number of his *Asclepiad* records in an effective style a professional visit he paid to a patient of great wealth. On the doorstep he passed a man in the lowest stage of destitution, who begged a trifle from him for a meal. The man was so poor and so wretched that, as Dr. Richardson says, if the world came to an end the next minute it would not "sinnify" to him; or at least it would be only something a little interesting for him to look at. Entering the mansion, and conducted to a dark, warm, richly furnished sepulchral chamber, he found almost the same man, only wearing a rich dressing-gown and a pair of furred slippers. The same grievances, the same sad views of the worthlessness of life, the same thanklessness on the receipt of advice which the other had manifested for two poor coppers, and the same hopeless desire for some impossible gigantic event to bring a moment's wonder, led the good doctor to the reflection which had occurred to John Bunyan before him, that there is a by-way to hell even from the gates of heaven, and to the further perception that the possession of vast wealth is as great a burden as the extremity of poverty, and that the effects of both are very similar. Both conditions lead to the same apathy, the same inclination to eat, drink, smoke, sleep, and revel in inane pleasures, to the same tendency to dishonesty. Just as the penniless man's conscience is deadened by his poverty, so is the rich man's by his wealth. The one will seek to take his neighbour's sixpence, the other will remove his neighbour's landmark. Lastly, says Dr. Richardson, in their diseases the two classes closely correspond. The degeneration of the heart, the muscles, the brain, the general enfeeblement which follows under-nourishment, is not to be distinguished from that which follows over-burden; and curiously, too, both adopt similar superstitions, fancies, follies. The professed and open charlatan lives, in fact, on the very poor and the very rich. The poor are their decoys, the rich are their dupes.

The poverty of wealth is curiously exhibited in the lately published reports of the two societies which concern themselves with the affairs of pharmacy. We do not make the contrast

with any idea of depreciating the Pharmaceutical Society, whose prosperity is an advantage to the whole trade. It is gratifying, too, to remember that we have at the head such a substantial corporation, and we fully believe that in a time of real peril this Society will be ready to risk its handsome resources for the good of the trade. We quite agree, too, with the contention that the constitution of the Pharmaceutical Society is not adapted for the purposes of trade protection primarily. Nevertheless, it may be permitted to quote a few round figures to show the tendency of the accumulation of wealth.

The Trade Association has an income of some 800*l.*, and has spent, say 1,000*l.* For that it shows us a result of nine fought out legal cases, each one of real importance to drug-gists, and some of which may be taken to have prevented many others. Besides these, many other services have been rendered which need not be here enumerated. The Pharmaceutical Society enjoys an income of some 16,000*l.* To obtain this something like 5,000*l.* is spent on the Journal, 2,700*l.* on the examinations, 1,000*l.* on postage, and 500*l.* on printing and stationery. Call the business expenses of the concern (not including the establishment) 10,000*l.*, and their remains a sum of 6,000*l.* Of this 4,500*l.* is required for house and staff expenses, 1,200*l.* is saved, and 250*l.* is spent for an evening's entertainment at South Kensington. The expenditure in which the trade, as a trade, is expressly interested consists of the two sums, 50*l.* for provincial education and 270*l.* for "law costs and surveyors' charges," but not more than half of the latter can be assumed to have been spent on the enforcement of the Pharmacy Act. We have therefore the result that something under 200*l.* from a net income of 6,000*l.* is devoted to the assistance of the trade generally—that is, members and non-members of the Society.

We point out this simply as a statistical fact. The trade have no ground whatever for complaint. It is true they contribute the examination fees which have made the Society so prosperous, but they have done this for their own purposes. It is very good of the Society to spend 50*l.* on provincial education and 100*l.* or so on the enforcement of the Pharmacy Act. They are not, and cannot be, a trade-protection society. They are a "learned body." Nor do we wish to suggest that one penny is spent on the establishment beyond what should be so spent. It is right and proper that British pharmacy should be creditably supported, and that the library, museum, model school, and gold medals should be managed in an efficient manner. Everyone recognises that this is done, and no doubt we all obtain indirect advantages from the existence of the Society, which can hardly be weighed or measured. But we may be excused for not being sure about this, when some of the guinea subscribers are not quite clear as to the return they get.

MATERIA MEDICA NOTES.

Cocaine Ten days ago a Hamburg firm received from Peru a consignment of cocaine prepared there from the fresh leaf, and which is, we understand, the first commercial supply which has been received in Europe. It is now a matter of common knowledge to pharmacists that in drying, and frequently in packing, the alkaloidal value of the coca leaf is diminished. For this reason it was suggested, shortly after cocaine came into prominence, that the alkaloid should be prepared in Peru from the fresh leaves, and exported in a crude state if necessary. Since that time our knowledge of cocaine has been widened, and we know that it is as possible to destroy it in course of manufacture as it is to do so in harvesting the leaves badly.

In our last week's market report we stated that a quantity of the present consignment, amounting to 30 to 35 lbs., was for sale at 1*s.* 5*d.* per gramme, but we have since learnt that it has been sold. The sample which we have received was labelled "cocaine mur," but on examination it proved to be the free alkaloid. The colour of the sample is almost white, and is in amorphous, hard granules. It gave the characteristic reactions of cocaine, but with sulphuric acid it gave in the cold a greenish brown colour which gradually changed to a pale violet; and the aqueous solution of the hydrochlorate reduced potassium permanganate instantaneously, and gave a bitter almond odour on boiling, showing that there is contamination with decomposition products. The alkaloid, however, was quite soluble in ether, thus differing greatly from the sample of South American cocaine examined by Professor Flückiger, which contained 43 per cent. of insoluble matter.

Palembang The sample of benzoin which we have previously referred to as having been recovered from a Benzoin. vessel which was wrecked in Table Bay in 1691 has become somewhat famous owing to its curious history; on that account it may not be out of place to give some further particulars regarding the quality of the sample, and as to its identity. By the lime process the gum-resin yielded 13 per cent. of benzoic acid, which was found to be quite free from cinnamic acid. As Palembang benzoin is the only variety which can authoritatively be said to be free from cinnamic acid, this result practically proves the identity of the benzoin. The sample contained 3 per cent. of moisture and 6 per cent. of insoluble matter, less than one-half per cent. of which was ash.

Australian The duty of 20*s.* per pound avoirdupois which Opium. is levied on all opium imported into Victoria tends to encourage the cultivation of the opium poppy, which was introduced into the colony many years ago by Mr. Bosisto. In 1870 Mr. Bosisto published the results of his experimental opium farming, and since that time the experiments have gradually extended, so that now it may fairly be said that opium farming is established and the production of opium increasing. The poppy cultivated in Victoria is the white-flowered *Papaver somniferum*, var. *glabrum*. It grows exceedingly well, generally to a height of 8 feet, and the capsules are of good size, about 3 inches being the extreme diameter. Samples of the capsules are shown in the Victoria Court, and in a few days Mr. Bosisto hopes to find a corner for the parcel of the stalks and capsules. Three balls of the opium obtained from the poppy are also exhibited, and we have had the privilege of examining the drug. The opium is of firm consistence, somewhat tenacious, and being quite free from insoluble matter, it is devoid of the granular appearance of Turkey opium. It is also somewhat lighter in colour, and when dried and powdered is similar in colour to powdered jalap. The odour of the drug is similar to that of the best samples of Turkey opium. It contains 12 per cent. of moisture, and from the powder we have obtained 11.5 per cent. of morphia, so that it contains in the moist state 10 per cent. of the alkaloid. If Victoria can produce an article so good as this, it is a pity that she should throw away a single sovereign on the imported article. We trust that ere long the need for the import duty will disappear, and that other colonies will follow Victoria's example in producing what drugs they can.

Japanese As already reported a parcel of honey was Honey. included in a trial consignment of Japanese drugs which were sold in Mincing Lane two weeks ago. As far as we are aware honey from Japan has not previously appeared in our markets, and for this reason it may be well to

place on record its more prominent characteristics. It possesses a coffee-brown colour; the odour is similar to Californian honey, but is somewhat offensive; and the taste is slightly bitter, though otherwise honey-like. On standing it separates into two layers, the upper granular and of firm consistence, the lower syrupy and less viscous than simple syrup. On separation from the granular portion, the syrup was found to have a specific gravity of 1.350. On treating the honey with water the greater portion of it dissolved, and there floated on the surface a large quantity of yellow pulverulent matter, which dyed the filtering paper, as well as remains of insects, pollen grains, and other suspended impurities. On examination this pulverulent matter, which makes up along with crystallised grape sugar the bulk of the granular portion, was found to consist of wax. This exists to an unusually large extent, and should make the substance an efficient basis for boot-blacking, which we understand from a correspondent is the purpose to which it is to be put. The product is never likely to be used in pharmacy, but as it is unique in some respects it would be of interest to trace its origin, and if possible to have information regarding the food of the bees and the source of the yellow colouring matter, which is the principal characteristic of the sample.

We have been informed that these leaves have been sent to this country as a substitute for coca leaves, the consignor being under the belief that they possess similar properties. Though their conformation presents a remote resemblance to that of the coca leaf, the varnished surface and the liquorice taste should remove any doubt on this point, and, moreover, the absence of the lateral mark along each side of the midrib, which is so characteristic of coca, together with the mucronate apex, will not mislead the close observer to suppose that they are coca leaves. Moreover, the leaves, though containing abundance of extractive and mucilaginous matter and a little tannin, do not contain an alkaloid; they probably contain a glucoside, but the quantity of the leaves under examination was too small to afford satisfactory proof of the indications in this direction.

A correspondent informs us that there are three Dodonea plants growing in Edinburgh Botanic Gardens. One of these came from the tropics, and the others are supposed to have come from New Zealand. The fresh specimen of these shows a longer and narrower leaf than those which are the subject of this note.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.

NESSLER'S REAGENT.

THE Pharmacopœial formula is the subject of a critical note by Mr. Thomas Green, pharmaceutical chemist, communicated to the Pharmaceutical Society of Ireland. It is pointed out in the copy of the paper which we have received that the official direction to dissolve 135 grains of potassium iodide and 100 grains of mercuric chloride in 15 oz. of boiling water is a mistake, because some of the mercuric iodide which is formed remains undissolved, on account of the small excess (13 grains) of potassium iodide directed to be taken; whereas the actual quantity of iodide required to make a clear solution with 100 grains of mercuric chloride is 245 grains. Mr. Green believes that this error has arisen "in transcribing the quantities from the metric to the British system." Wanklyn gives 35 grammes of potassium iodide

and 13 of mercuric chloride as the initial quantities for a litre of the solution, while theory requires 33.2 and 13.55. The compilers of the Pharmacopœia appear to have intended to take half of Wanklyn's quantities as sufficient for a pint, and as near as possible have done so for the mercury salt, but for the potassium iodide they have taken a fourth only ($\frac{1}{4}$ of 35 grammes = 13.53 grains). The Pharmacopœia evidently intended 270 grains to be taken, and with this quantity the solution can be made without difficulty.

NOTE ON LIQUOR MORPHIINI BIMECONATIS.

As prepared by Squire, the originator, and by others, this solution was of a sherry-brown colour. The official solution, however, is colourless, or nearly so. In the official instructions for preparing this solution no mention is made of filtration, and, as filtration will often be necessary, it may not be amiss to draw attention to the fact that filter-paper containing a trace of iron is totally unfit for this solution, iron being a common impurity of filter-paper of commerce. It is necessary before using an unknown sample of paper to test it for iron. The usual delicate tests for ferric iron, ferrocyanide and sulphocyanide of potassium, are highly sensitive in this case. It is only necessary to place a drop of a dilute solution of either reagent on the suspected filter-paper, and then moisten with any of the dilute mineral acids, when a blue or red spot, as the case may be, will indicate the presence of iron. Filter-paper containing this impurity may be freed from it by washing with dilute nitrohydrochloric acid, and rinsing thoroughly with distilled water.—THOMAS GREEN.

THE DETECTION OF GAMBOGE.

PROFESSOR HIRSCHSOHN gives the following as characteristic tests of gamboge. It dissolves in petroleum spirit with an intense yellow colour. This solution is decolorised on shaking with solutions of NH_4Cl , NaOH , borax, and Na_2CO_3 , the resin being extracted from the petroleum. If to the petroleum extract of gamboge a few drops of an alcoholic ferric chloride solution be added, the alcohol at the bottom of the test-glass is coloured intensely black. If two to four volumes of a solution of ammonia in petroleum be added, the resin is precipitated, and is no longer soluble in petroleum spirit. The author has devised from these reactions the following method for detecting garaboge:—The sample is finely powdered, and treated with petroleum spirit. If the extract be colourless, the shaking must be repeated, with the addition of HCl , as in presence of soap the gamboge is not dissolved. If the extract still remains colourless, gamboge is not present. If a yellow solution is obtained, a portion is shaken with dilute NaHO (1:100); and if a red coloration occurs from the presence of rhubarb and radix lapat, it is saturated with ammonia gas, and the precipitated resin separated. The precipitate dissolved in alcohol should turn black with Fe_2Cl_9 .—*Phar. Ztschr. Russl.* and *Journ. Soc. C. I.*, March 1886.

[The petroleum spirit should have a specific gravity of not less than 0.700.]

DISINFECTION FOUl WATER.

THE subject of a patent (4714) by G. Langbein, Leipsic. An aqueous solution of sodium nitrite (or any soluble nitrite) of a strength such that 100 litres of the solution contain 69 kilos. of the sodium nitrite, is mixed with an equal volume of dilute sulphuric acid containing 5 kilos. of acid in 1,000 litres of water and added to the foul water or sewage. The nitrous acid set free is oxidised by the atmospheric oxygen, and the hyponitric acid produced acts upon the organic matter present, nitrous acid being again produced; the process is therefore repeated so long as organic matter capable of being oxidised remains. The patentee states that all organisms originally present are destroyed.—*Journ. Soc. Chem. Ind.*

MELITOSE FROM EUCALYPTUS MANNA.

B. TOLLENS, having obtained 22.5 grms. of this manna from Baron F. v. Müller, has experimented upon it, and by careful purification obtained 10.5 grms. of melitose from 20 grms. of the crude substance. The percentage of water was found to be 14.67, and the rotary power 104.00—104.44° for $[\alpha]_D$ at 20°.—*Journ. Soc. Chem. Ind.*



AND
Literary Notes.

1 *Text-book of Pharmacology, Therapeutics, and Materia Medica.* By T. Lauder Brunton, M.D., D.Sc., F.R.S., &c. Adapted to the United States Pharmacopeia by Francis H. Williams, M.D., Boston, Mass. Second edition. London : Macmillan 1885. 8vo. 44 + 1,139 pages. 21s.

WE have so recently referred to the first edition of this work that little remains for us to say, further than that while our last review was being written the edition was exhausted, and a second had actually been prepared by the author. In this edition the changes in the new Pharmacopeia are commented upon. The section on general pharmacy is now a useful chapter of definitions and of the pharmacopeial representatives of the different forms of preparations prescribed by physicians. We may here refer to Section V., which treats of vegetable *materia medica*. This section is one of direct interest to pharmacists, since it includes an important branch of pharmaceutical knowledge. The characters of all drugs, and frequently of their adulterations, receive very full treatment, and the value of the text is enhanced in many cases by admirable woodcuts. The physiological action and uses of each drug also receive very comprehensive notice. Section III., on "Inorganic *Materia Medica*," is equally good. It is not, however, for the pharmaceutical knowledge which may be obtained from the book that we especially recommend it, but for the interest which attaches to the chapters on the actions of drugs. Although included in a department (pharmacology and therapeutics) in which the pharmacist has little direct interest, the subject is one which may profitably be studied in leisure moments. Dr. Lauder Brunton envelops the subject with considerable fascination by means of record of actual experiment and numerous diagrams of various parts of the body. The work has already taken high rank in English scientific literature, and the early demand for a second edition is solid testimony to its worth.

Watt's Manual of Chemistry. Vol. ii., "Chemistry of the Carbon Compounds, or Organic Chemistry." Second edition (thirteenth edition of Fownes). By William A. Tilden, D.Sc., F.R.S., &c. London : J. & A. Churchill. 1886. Crown 8vo. 19 + 662 pages. 10s.

IT will be in the recollection of our readers that the twelfth edition of this well-known manual of chemistry showed a new departure from previous editions in its division into two separate volumes, one dealing with inorganic, and the other with organic chemistry. At the same time, the old designation "Fownes's Manual" was replaced by "Watt's Manual." This change was due to the fact that the able editor, the late Mr. Henry Watts, had so greatly infused the influence of his learning into its pages that little but the framework of the original of Fownes remained. Shortly before his death a new edition was called for, and Mr. Watts was enabled to put the first volume through the press, but it has remained to other hands to complete the edition. Pharmacists will consider that the selection of Dr. Tilden for this purpose is peculiarly fitting. The manual has had a high pharmaceutical reputation from the beginning, due to the fact that its author was a pharmaceutical professor; and now that it again comes under the charge of a chemist, who began his studies in pharmacy, and his scientific career as a pharmaceutical student and teacher, we should expect that these circumstances would go far to sustain the popularity of the work.

While recognising the care and skill which have been devoted to the labour of editing this volume, we cannot forbear to notice a tendency to subordinate a characteristic which has made the book a favourite with medical and pharmaceutical students; we refer to passages which are of greater interest to these than to any other students. In some previous editions the pharmaceutical portion was treated

with commendable fulness, although there was an apparent weakness regarding what was outside of pure chemistry. Now, since organic compounds have increased to almost unmanageable proportions, it would appear that the pharmaceutical part has to make way for what is "of theoretical interest and practical importance" generally. This is unfortunate for all readers. As an example of what we refer to, we may take the chapter on *Alkaloids*. In this we had expected some reference to the recent progress in the artificial formation of this important class of bodies, or to results of equally recent investigations as to alkaloidal derivatives; but there is none. Then the rather threadbare list of vegetable alkaloids might have been more fully revised and amplified; there is scope, for example, to say something more about cinchona bases (we now get some of these from a different genus), and other important groups. Many interesting alkaloids have come into use recently, such as cocaine and pilocarpine, and these are deserving of at least a line each, which is the space devoted to "curarine—the arrow poison of Central America" (*sic*). In many cases, too, the botanical names of plants are quite out of date; *Cerasus laurocerasus*, *Arbutus unedo*, and *Convolvulus Schiedianus* are good, or rather bad, examples.

It must not be inferred from these remarks that Dr. Tilden's work on this volume has merely consisted in seeing it through the press; there is evidence of many important revisions and corrections, and the labour in bringing the nomenclature in conformity with the system advocated by Mr. Watts is itself sufficient reason for the new edition. The additions are necessarily many, and the condensation which they have caused, in order to keep the volume within convenient limits for students, reflects credit on the editor. On the whole, this edition well maintains the reputation of what Dr. Tilden calls *Watts-Fowne's Manual*.

Materia Medica and Therapeutics. — Vegetable Kingdom, Organic Compounds, Animal Kingdom. By Charles D. F. Phillips, M.D. London : J. & A. Churchill. 25s.

DR. PHILLIPS published the first part of his treatise on "Materia Medica and Therapeutics," in 1874; the volume then issued being confined to the vegetable kingdom. It contained 584 pages, and was at once recognised as original among works on *materia medica* in several respects. First the author's evident purpose was less to describe plants than to treat on their medicinal properties, and the sections of each chapter entitled "Therapeutic Action" were seen to contain very much information which is looked for in vain among works of this class generally. Especially were the less familiar medicines treated with much thoroughness, observations from all sources were brought together, and to these were added the author's own experiences, so that the chapters were practical guides to the treatment of disease, and in the treatment of disease the author was evidently a member of Ringer's Eclectic School, ready and willing to learn from all sources, medical authorities, savages, quacks, tradition, homœopathists, and even pharmacists. In 1882 Dr. Phillips, who, in the meanwhile had been seriously injured in a railway accident, and had been compelled in consequence to resign his lectureship on *Materia Medica* at the Westminster Hospital, brought out a larger volume (820 pages) in succession to the first, on the inorganic substances of medicine, treated on the same plan. Now he has re-written and re-cast his first volume, has added to it chapters on the artificial organic substances used in medicine, and on the medicinal substances derived from the animal kingdom. The new volume contains 1,081 pages, but the type used being large and handsome, the work is less noticeable for the quantity than for the quality of its information. The plan followed throughout is to class plants and animals according to families, then to discuss those selected, as far as applicable, under the heads description, active ingredients, physiological action, therapeutical action, external, and therapeutical action, internal, preparations and dose, and adulterations. Under this arrangement Dr. Phillips treats the *materia medica* from a modern physician's point of view, and his book is so fully indexed, both under drugs and diseases, that it forms so far as it goes a valuable guide to treatment as well as a treatise on the natural history of medicines.

Of the medicines of vegetable origin introduced since what may be called the first edition of this work, we may

mention *coca* and *cocaine*, which are not treated so fully as we should have expected; *jaborandi*, an excellent review; *euonymin*, "an accepted though not widely-known remedy" in bilious conditions, especially with rhubarb or saline adjuvants; *convallaria*; *tonga*, "within my own experience in facial and other neuralgias it has given quicker relief with less unpleasant effect than many other remedies," but, "its importation being almost a monopoly the medicine is at present too expensive for general use." *Jequity*, a useful summary; *hamamelis*, the good effects of hazelin in piles are especially noted; *gelsemium*, in neuralgia, "especially (but not only) when affecting the face, much relief has been experienced from gelsemium, but either there is more than average uncertainty in its action, or else the preparations of it vary in power, since some observers record much better results than others. Bartholow states that the alkaloid disappears from the dried root, so that this might explain some failures." *Cascara sagrada*, "although a useful alternative remedy, I believe it will not be found to justify the extravagant reports of its efficacy, and in my opinion it loses its effect after continuous taking it for some time." *Grindelia robusta*.—After quoting statements of favourable results in asthma from Bartholow and Stillé, the author says, "In this country we have not at present such favourable experience. I have used 15 minimis of the fluid extract in a highly neurotic subject, when the malady was for the time complicated with bronchial catarrh, with temporary not striking relief, which was obtained better by atropia, also by pilocarpine." *Walnut*.—This plant seems to illustrate the fact that sometimes no definite physiological action can be made out, and yet a therapeutical effect may be obtained. . . To a limited circle it has been known for some time as valuable in the sickness of pregnancy and of uterine disorders."

The physiological action and therapeutics of the organic compounds, such as alcohol, chloral hydrate, carbolic acid, the ethers, &c., are treated, as they deserve to be, at considerable length and with great care, and it is evident that Dr. Phillips is of the school which expects great things in medicine from laboratory products. In this, as in all other sections of his work, opposite views are collected, and as a consequence some of the articles—that on alcohol for example—would need but little alteration to convert it into a burlesque on medical science, so varying have been and still are the views of the authorities.

The medicines contributed by the animal kingdom for the relief of human distempers are dismissed by Dr. Phillips in 36 pages. A future generation will assuredly go back to the ideas of our ancestors, and adopt the apparently natural theory that remedies are more likely to be assimilable and direct in relief in proportion as they correspond in nature to the system to which they are applied.

Churchill's Technological Handbooks—Oils and Varnishes.
Edited by James Cameron, F.I.C. London: J. & A. Churchill. 1886. Crown 8vo. 376 pages, with illustrations. 7s. 6d.

THE day for encyclopedic reference books seems to be past, if we may judge from recent departures, of which this series of handbooks is a good example. It is only very expensive encyclopedias upon which specialists can be employed, and this very fact ensures that such works can never, except in rare cases, find their way to the bookshelves of the practical man. Hence the various issues of technological handbooks, each devoted to one branch of manufacture, and edited by a specialist, form a distinct bibliographic advance. The present volume is one which is of more practical interest to pharmacists than its predecessors. Cooley's "Cyclopædia" is taken as a basis, but the editor has put the matter together in a different order, and has supplemented it largely from his own experience and other sources.

The chemistry of oils receives general notice in a preliminary chapter, wherein are described the various fatty acids and other bodies which enter into the constitution of oils derived from the three natural sources. Oils are then considered more in detail, under the groups animal oils, vegetable oils, and mineral oils; but between the two latter there are chapters on empyreumatic, medicated, and other compound oils, and on waxes. Purification and bleaching also receive attention, and a lengthy and important chapter

is devoted to oil-testing. Following this are forty pages on varnishes and their components, and an appendix, in which is included a list of Mincing Lane prices—the purpose of which is not quite apparent—and an index. This handbook makes no pretension to exhaustiveness and accuracy in detail, yet it is on the whole to be regarded as a complete treatise on the subject of oils and varnishes. Mr. Cameron has taken great pains to collate and give in brief space the best of the many valuable papers which have been published in this department during the last few years. This is particularly noticeable in the chapter on oil-testing, in which mineral oils get very full treatment. The rather meagre list of references given in Cooley has been supplemented by the editor, and the original source of information is given in all other cases, consequently adding to the value. There are some curious errors in the book. In orthography, for example, we find Mr. John Moss becomes "Mass" twice in the course of the book, and Hirschsohn becomes "Hirschholm." Some of Cooley's errors of fact have been reproduced—for example, the statements that the peppermint oil of commerce usually contains fully a third of rectified spirit; and that the "American" or "crude oil of peppermint" consists chiefly of oil of turpentine. Similarly it is stated that druggists generally add rectified spirit to cassia oil to keep it from freezing. The editor, a Somerset House analyst, is in a position to know that such practices are not so prevalent now as in Cooley's day. The formulary portion of the book is fairly complete, and comprises formulæ for many uncommon medicinal oils. The chapter on varnishes contains good advice and excellent recipes. We are pleased to notice that the work of several well-known British pharmacists is liberally quoted in connection with the chemistry of oils.

Land. By James Platt, F.S.S. London: Simpkin, Marshall, & Co. Pp. 208. Price 1s.

THE prolific author of "Business," "Money," "Life," and many other treatises with monosyllabic titles here contributes his views to the prominent question of the day. The attraction of Mr. Platt's style lies in the fact that, though he has written so much and so usefully, he never assumes the tone of the professional author in place of that of the trader. He expresses the views of the large class of self-made business men who can do and think for themselves on political and social questions. In "Land" he has brought together such a quantity of information respecting freehold, leaseshold, and copyhold tenures, the rights of landlords and tenants, the registration of titles, primogeniture, settlements, and the various proposals for improving the laws concerning land, that if he had charged 6s. 8d. for his treatise, and omitted his "views," it would have been a cheap and useful manual on the complicated subject. Mr. Platt's "views" are at least liberal in their variety. On page 26 he tells us "State help is a delusion and a snare:" twenty-two pages further, "there should be a registry kept in every parish in the kingdom of every bit of land and tenement therein, and its owner." He is bitter against the powers of landlords over leaseholders, and disagrees with the Leaseholds Enfranchisement Bill. He is "utterly opposed to Government taking the place of the landlord, but when the land laws are altered . . . would earnestly advocate the State to redeem the land for the people." When he says that "land must be as free from trammels and restrictions as every other industry," we almost doubt whether he has fully grasped the controversy he writes about. But it is fair to say that he never lets his opinions warp his statements of fact, and these, at least, are useful and clearly stated.

WE have received from Messrs. Macdougall Brothers a pamphlet on *The Bot, or Ox-warble Fly*, the matter of which is based on the able reports by Miss Ormerod, and convey a succinct account of the life-history and ravages of the insect and its maggot. The compilers have also brought together a great amount of opinion by stock-breeders and others interested in the subject, and they succeed in proving their case, that the insect should be attacked while it is in its most dangerous or maggot state. It is computed that this pest is the cause of a loss of from two to six millions a year to British farmers. The pamphlet is well designed to catch the eye of those for whom it is intended, and excellent illustrations add to its usefulness.

HISTORY OF NAMES.

(Continued from page 230.)

THE materials for the following article are taken principally from the "New English Dictionary on Historical Principles," projected by the Philological Society and edited by its President, James A. H. Murray, LL.D. Littré and other authors have also been consulted.

ALUDEL, from the Arabic *al-uthal*, signifies simply "the apparatus." It was a pear-shaped vessel of earthenware or glass, open at both ends, so that a series could be fitted one above another. Used by the alchemists for sublimation.

AMADOU, German tinder, is prepared from species of fungus *Polyporus* and *Boletus*, growing on old oaks, beeches, ashes, &c. The word is formed on a dialectal French word *amadouer*, to allure, but the origin of this word is doubtful. Littré traces it to the Danish *made*, old Norwegian *mata*, meaning to attract with a bait.

AMALGAM is an old alchemical word, probably a perversion of the Latin *malagma*, a mollifying poultice, traceable to the Greek *malassine*, to soften. Other early writers associate it with *ana*, together, and *gamos*, marriage. Bacon (1626) writes the word "amalagma."

AMBER is originally the name of ambergris, the product of the whale. It is from the Arabic *anbar*. It afterwards became extended through some confusion to the fossil resin found chiefly on the shores of the Baltic, and now known in English as amber simply. In French the two names are distinguished as *ambre gris* and *ambre jaune*. The Greek name of the resin was *electron*, which has given birth to our term "electricity." The reference to amber in Ezekiel i. 4. is given in Wyclif's version as *electre*. Spermaceti has been known as white amber.

AMBROSIA, variously signifying the food, the drink, and the anointing oil of the gods, was named from the Greek *a*, not, and *mbrolos*, *mrotos*, *mrtos*, mortal. It was also applied to several plants, notably to a herb allied to the wormwood, *Ambrosia artemisiifolia*, called the oak of Cappadocia. The sage and the betony were also so named.

AMBULANCE—Formerly *hôpital ambulant*, a walking hospital, first came into use in the Crimean war.

AMMA is an old English term for a truss, taken without literal alteration from the Greek.

AMMONIA and AMMONIAC are from a Greek word applied both to the salt and the gum, products of the Lybian region Ammonia, which was named from the shrine of the deity Jupiter Ammon, the Egyptian god Amún. Sal ammoniac is believed to have been first prepared from the dung of camels in this district, as it still is in Egypt. In Pomet's "History of Drugs," (1712) we read, "The Fennell bearing Ammoniac grows plentifully in the deserts of Lybia." Armoniac, a corruption found in mediæval Latin and old French and English, was probably suggested by association with the Greek *armonia*, a fastening, in reference to the use of the gum as a cement and the salt for soldering. Bole armoniac is a corruption of "armeniac," and means Armenian earth.

AMOMUM.—An ancient oriental spice plant that has not been identified. The name is now applied to a genus of aromatic plants (N. O. *Zingiberaceæ*), including the species which yield cardamoms and grains of paradise.

AMULET, a charm, from the Latin *amuletum*, of unknown origin, was applied by some of the early medical writers to medicines whose action was occult.

AMYL, an obsolete term for starch, from the Latin *amyllum*, from the Greek *amylos*, meaning not ground at the mill. Amylic alcohol was so called because it was first obtained from the fusel oil separated in purifying or rectifying ordinary spirits distilled from potato or grain starch.

ANACARD, from the Latin *anacardium*, the cashew nut; is named from the Greek words *ana* and *kardia*, which describe the resemblance of the nut to a heart.

ANÆMIA is from the Greek *an*, privative, and *aima*, blood, signifying a lack of blood.

ANÆSTHESIA, from the Greek *an*, privative, and *aisthesis*, feeling, signifying a lack of sensation. Analgesia is the condition of insensibility to pain, distinguished from anaesthesia, complete insensibility (from *an*, privative, and *algein*, to feel pain).

ANALYSIS is from the Greek *analyein*, to unloose.

ANATOMY comes from the Greek *anatomē*, a cutting up.

ANNATTO, arnatto, anatta, and other forms represent the native American name for the *Bixa orellana*, which yields the dye, this being the waxy pulp surrounding the seeds.

ANEMONE is a literal transcription of a Greek word signifying "daughter of the wind."

ANGELICA, *herba angelica*, called also "root of the Holy Ghost": was so named on account of its reputation as an antidote to poison and pestilence, but when and by whom does not appear. Harvey (1592) theologises the current idea in the expression "converting the wormwood of offence into the angelica of pure attonement."

ANGUSTURA BARK, the produce of the *Galipea* or *Cusparia fruticosa*, was named from the city of that name on the Orinoco, now called Ciudad Bolívar.

ANILINE is formed from *anil*, the native name of the indigo shrub. It is traceable to the Arabic *an-nil* and the Sanscrit *nili*, which has the primary meaning of dark-blue.

ANISE comes from the Greek *anison*, *aneson*, *anethon*, *aneton*, under which names the *Pimpinella anisum* and the *Anethum graveolens* seem to have been confounded. The latter is believed to have been the anise of the Bible. Wyclif gives it variously as "anete" and "anese."

ANODYNE, a medicine which alleviates pain, from *an*, privative, *odyne*, pain. The word *anodynus* was used by Celsus.

ANTHELMINTIC.—The Greek word for worm *Elmins*, furnishes the basis of this word.

ANTHER.—The word *anthera* in classical Latin meant "a medicine extracted from flowers." It was derived from the Greek *anthera*, the feminae of *anthos*, a flower. As many of the popular medicines extracted from flowers were the internal organs, the name found its way back to mean these particularly. Saffron, for instance, was one of the chief *antheræ*, and so the term came to be applied to the stigma generally. It was not till towards the year 1700 that it became limited to the pollen-bearing organ. This was previously known as the *theea*, *capsula*, or *aper*. The word *anthos* was formerly applied to rosemary as the flower *par excellence*.

ANTHONY'S, OR ST. ANTHONY'S, FIRE.—The old term for erysipelas and shingles. In the eleventh century there raged a violent form of erysipelas, or "sacred fire," over which it was believed St. Anthony could exercise great influence.

ANTHRACENE is derived from the Greek word *anthrax*, coal. The same word also signified carbuncle in Greek; hence its application to the sheep and cattle disease so called. The burning nature of a carbuncle accounts for the double meaning in Greek.

ANTIDOTE, from Greek *anti-doton*, something "given against."

ANTI-MACASSAR.—It may be presumed that Messrs. Rowlands are responsible for this word. The article which it describes is intended to protect sofas or easy-chairs against the effects of macassar oil on the head, which it seems to be assumed everybody uses.

ANTIMONY. The origin of this word has been much discussed. The fantastic story told by Johnson, Dr. Faïs, and many other writers, that it was named *antimoine* (Greek *antimonoeious*) because Basil Valentine, who first used it medicinally, was unfortunate enough to kill several of his brother monks with it, is dismissed unceremoniously by both Littré and Murray. It certainly would have been astonishingly candid on the part of Basil Valentine, if this story had been true, that he should have immortalised his blunders by himself enshrining the history in the word, which he used in the title of his treatise "Currus triumphalis Antimonii." But, besides, the word is found more than 400 years before Valentine's time in the writings of Constantinus Africanus of Salerno (Chaucer's "cursed monk dann Constantyn"), towards

the end of the eleventh century. This, however, by no means proves anything against the alleged etymology, though it clears the professional character of Basil. Littré tells us that other etymologists have conjectured that the name came from Greek *anti-monos*, because it was never found alone; and others from *anti-menein*, because of its tonic properties. But he, and Dr. Murray following him, both prefer the derivation from an Arabic word, *uthmud, athmod*, latinised into *athmodium, atimodium, atimonium, antimonium*. The earlier form of the Arab word is *ithmid*, and Littré has supposed this to be a contraction of *isthimmid*, and to have come from the Greek *stimmida*, which got into the Latin *stibium*, so that, curiously enough, *stibium* and *antimony* would have one origin. The name was first applied to the native trisulphide, the grey antimony, called crude or black antimony when calcined and powdered, the *stibium* of the ancients, the *al-kohl* of the Arabs, the *antimonium, protus, leo ruber, plumbum nigrum, lupus metallorum* of the alchemists. Besides grey antimony, there are red antimony, the mineral *kermesite*, a compound of the oxide and sulphide; white antimony or *valentinite*, the trioxide; arsenical antimony, the mineral *allemontite*; antimony ochre, the mineral *cervantite*. Red antimony is also called saffron of antimony and antimony blonde, white antimony=antimony bloom, and grey antimony=antimony glance. The "butter" is an old name for the trichloride; the "crocus" is an impure sulphide with sodium formed as a scoria in smelting antimony. Flowers of antimony are crystals of the trioxide formed when the metal is sublimed; and glass of antimony is an oxy-sulphide fused. The "regulus" was the simple element.

APHTHIA, the medical term for the children's complaint thrush, or strictly for the little ulcers in the mouth which characterise that complaint, is traced to the Greek *aphein*, to set on fire, to inflame.

APOMORPHIA, or apomorphine, is an alkaloid produced, as its name indicates, from *morpheia*, by heating it with an excess of hydrochloric acid.

APOPLEXIA was *apoplēxia* in Greek and Latin. *Apoplessin* (in Greek) meant to disable by a stroke, from *plessin*, to strike.

APOSTEME is an obsolete English word for abscess. The Greek word *apostema* meant separation. It was also sometimes spelt *apostumus*, from a belief that it was derived from the Latin *postumus*.

APOTHECARY.—The Latin word *apothecearius* meant a storekeeper, the Greek *apothekē* was a store-house. The word was formed from *apo*, off, and *tithenai*, to put, and meant a place where things were put away. The French word *boutique*, the Spanish *botica*, and *bodega* have the same origin. The word seems to have acquired its special connection with medicine because spices, drugs, and preserves were regarded as articles which could be stored, in contradistinction to meat, fruits, and other perishable products.

APOZEME, an old name for a decoction, came into English use from the French and Latin, and originally from the Greek *apo-zēin*, meaning to boil away.

APPRENTICE, of origin similar to apprehend, from *ad prehendere*, to seize upon. For several centuries the abbreviated term "prentice" was the more common.

AQUA MIRABILIS was a "wonderful water prepared of cloves, galangals, cubeb, mace, cardamoms, nutmegs, ginger, and spirit of wine, digested twenty-four hours, then distilled" (Johnson).

AQUA VITA (or Vite), a term of the alchemists applied to ardent spirits or unrectified alcohol; sometimes commercially to spirits of the first distillation. *Eau de vie* is the modern form of the term.

ARCHIL, more correctly orchil, is the name of a purple dye, as well as of the lichen (*Roccella tinctoria*) from which it is obtained, which also yields litmus and cudbear. Littré has made a curious error in deriving the word from the name of the person Federigo Oricellari, who introduced the plant into Italy about 1300. Dr. Murray gives quotations from early writers which show that Federigo did not give his name to the weed, but derived his surname therefrom.

ARECA, a Portuguese word, from the Malayalam *adukka*, Canarese *adike*, Tamil *adaikay, adai* signifying close arran-

gment of the cluster, and *kay* nut or fruit (Bishop Caldwell). Dr. Murray's statement that "the accent is on the first syllable in all languages" will be news to most pharmacists and drug dealers.

ARGOL, the tartar deposited from wines; crude cream of tartar. The word is found in Chaucer (1386), and a century earlier, but its origin is unknown.

ARNICA.—The origin of this name is unknown.

ARROWROOT.—The *Maranta arundinacea* acquired this name because its fleshy tubers were used to absorb poison from wounds, especially from those caused by poisoned arrows.

ARSENIC, from the Greek *arsenikon*, a variation of *arrenikos*, male or masculine, which was applied first to the native trisulphide, the yellow orpiment, in reference to its powerful properties. The Romans called orpiment *auri pigmentum*, hence the common name. The disulphide, realgar, red orpiment, or red arsenic was the sandarake of the Greeks, the sandaraca of the Romans.

ARTEMISIA, the genus of plants which includes the wormwood, mugwort, southernwood, &c., was named from *Artemis*, the goddess Diana. Trevisa (1398) writes: "Artemesia is callyd moder of herbes, and was sometyme halowed to the goddesse that hyghte Arthemis."

ARTHURITIS, from the Greek *arthrou*, joint, was originally applied to pains in the joints generally, now specifically to gout.

ASAFETIDA, from *aza*, Persian for mastic, latinised, and *satida*, describing the most striking characteristic of the genus. Trevisa (1393) writes: "Some stynking thynges ben put in medycynes, as Brymstoone and Asafetida."

ASBESTOS, a Greek word meaning unquenchable, inextinguishable, was first applied by Dioscorides to quicklime. Pliny applied it to the fibrous mineral amiant, or amiantus, of the Greeks, the hornblende asbestos of mineralogists, which he erroneously regarded as a sort of flax.

ASSAY is traceable through old French, Spanish, and Italian, to the Latin *exagium*, a weighing, from *ex-agere*, or *exigere*, to weigh.

ASSETS is a form of the modern French word *assez*, enough. Both come from the Latin *ad satis*. The use of the word in its English form descends from the Anglo-French law phrase *over assetz*, to have enough.

ASTHMA, a Greek word, formed from *aειν*, to breathe hard, which itself is traceable to *a-ein*, to blow.

ATHANOR was the digesting furnace of the alchemists, in which a constant heat was maintained by means of a tower which provided a constant supply of charcoal. From the Arabic *al-Tannur*, the furnace, *Tannur* being a Hebrew or Aramaic word, from the root *nur*, fire.

ATOM, from Greek *a* and *tom-os*, cut, from, *temnein*, to cut, signifying incapable of further division. In Latin *atomus* was used to express the twinkling of an eye as well as our meaning of the word.

ATROPHY means a lack of nourishment, from *a*, privative, and *trophe*, nourishment.

ATROPINE, from *atropa*, the deadly nightshade, is derived originally from the Greek *Atropos*, inflexible, the name of that one of the sister Fates (Clotho, Lachesis, and Atropos), which cuts the thread of human existence.

ATTAR is simply the Persian for essence; *atar-gul* is essence of roses.

AVOIRDUPOIS.—The old word is *aver*, *areir*, *aroir*, property, goods, *de peis*, of weight. The pronunciation of *aver* has been retained, and the Parisian *pois* about 1500 superseded the Norman *peis*. "The *du* was substituted for *de*," says Dr. Murray, "by some ignorant improver about 1640-1650."

AZOTE.—The name given by Lavoisier, from its inability to support life, to the gas now called nitrogen. It is formed from *a*, privative, and *zoe*, life; but Littré points out that it is incorrectly formed with the *t*. The Greek word *azotos* meant not without life, but without a girdle. *Azo* is a chemical prefix indicating a substitution of nitrogen for another element.



[The following List has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]

Applications for Letters Patent:—

Aerated Waters.—5334.—April 16, 1886.—G. Epstein.—5121.—April 13, 1886.—E. G. B. Barlow.

Alkaline Carbonates, &c.—5326.—April 16, 1886.—T. Turjnam.

Bottles, &c.—5107.—April 13, 1886.—A. de Ratti.—5112.—April 13, 1886.—L. B. and G. V. Bethell.—5213.—April 14, 1886.—W. B. Fitch.—5283.—April 15, 1886.—H. W. Stevens.

Bottle Cases.—4560.—April 1, 1886.—T. B. Bates. Improvements in cases for protecting bottles or other articles in transit through the post or otherwise.

Bottle Stopping—4420.—March 30, 1886.—B. Harrison.—4467.—March 30, 1886.—A. Kempson.—4558.—April 1, 1886.—G. H. Jones.—4632.—April 2, 1886.—H. Kent.—4730.—April 5, 1886.—W. Hardy, junior.—4876.—April 7, 1886.—S. J. Hersee, J. Donnington Campbell, and C. S. Western.—5346.—April 16, 1886.—L. Kalling, junior.—5380.—April 17, 1886.—H. Ecke.—5400.—April 19, 1886.—T. Trussell.—5422.—April 19, 1886.—J. S. Davison.—5462.—April 20, 1886.—W. Tucker.—5548.—April 22, 1886.—W. Roberts.

Bottles, Syringe Attachment for.—5383.—April 17, 1886.—A. B. Tutton.

Bottles, Taps for.—4889.—April 7, 1886.—W. Reynolds. Improvements in taps to be applied to the mouths of bottles to draw off aerated liquids therefrom.

Bottles, Wrappers for.—4925.—April 8, 1886.—K. Giese. Improvements in machines for manufacturing straw wrappers or coverings for bottles and other similar objects.

Carbonate of Soda.—4922.—April 8, 1886.—C. F. Claus.

Carbonate of Soda—5456.—April 20, 1886.—T. T. Mathieson and J. Hawliczek. A method for purifying crude carbonate of soda termed "black ash," and the recovery of ammonia therefrom.

Caustic Powders.—4737.—April 5, 1886.—G. J. C. M. Baron de Liebhaber. New caustic powders for the removal of paint and other deposits.

Colophony, Treating.—4743.—April 5, 1886.—J. C. Mewburn. A communication from La Société Renard et Duron of France.

Disinfecting Compounds.—5151.—April 13, 1886.—H. H. Lake. A communication from F. L. Sarmiento, W. G. Grimm, S. P. Sadler, F. J. Sarmiento, and J. A. Wiedersheim, of the United States.

Electric Furnaces for the Manufacture of Chemicals.—5532.—April 21, 1886.—W. P. Thompson. A communication from The Cowle's Electric Smelting and Aluminum Company of the United States. Improvements in or relating to electric furnaces on the Cowle's principle to the manufacture of chemicals by means of such furnaces and to the utilisation of substances obtainable thereby.

Expelling Sulphuric Acid.—5016.—April 10, 1886.—J. H. Johnson. A communication from J. L. Kessler, of France. Improved process or means for expelling sulphuric acid in excess from sulphates and bisulphates.

Filters.—4656.—April 2, 1886.—J. S. Sawrey.—5669.—April 24, 1886.

Hair Restorer.—5165.—April 14, 1886.—M. Nicolson.

Hydrates of Strontia, &c.—5170.—April 14, 1886.—J. Mactear.

Inhalers.—4746.—April 5, 1886.—J. L. Crawford and R. Lees.

Medical Apparatus for treating persons suffering from Throat Affections.—5481.—April 20, 1886.—J. D. Newton. A communication from V. Meyenberg, of Germany.

Pessary.—5390.—April 17, 1886.—E. Dodd.

Pipes for Smoking and Applying a Medicated Material.—4698.—April 3, 1886.—A. Strauss.

Purgative.—5520.—April 21, 1886.—E. David. A purgative of fluid substance and a special syringe for applying this purgative.

Regulating the Supply of Milk, &c., from Bottles to Infants.—5180.—April 14, 1886.—J. Carter.

Resinous Compounds.—5270.—April 15, 1886.—J. B. Melvin

Surgical Elastic Hosiery.—4682.—April 3, 1886.—J. H. Haywood. A new or improved method of manufacturing surgical elastic hosiery.

Tersulphides of Barium, Treating, &c.—4742.—April 5, 1886.—H. L. Pattinson, junior.

Vaporising Chemical Agents.—5488.—April 20, 1886.—W. H. W. Wilkinson. Improved apparatus for vaporising chemical agents and directing the vapour on to surfaces or into cavities.

Warts, Removal of.—4994.—April 10, 1886.—J. Higson. Improvements in the manufacture of soap particularly adapted for the removal of warts.

Specifications published during the month. (Postage, 1d. each extra):—

1885.

4,682. J. Messon. Bottles, &c. 8d.

4,981. F. J. Austin. Disinfecting, &c. 4d.

5,252. H. E. Newton. Explosive compounds. 4d

5,280. W. L. Wisc. Effecting the decarbonation of earthy carbonates. 8d.

5,388. H. B. Condy. Hyposulphates and sulphates of alkalies. 6d.

5,468. J. H. Stone. Syringes, &c. 6d.

5,472. L. Schröter. Purifying, &c., waters. 8d.

5,620. C. Wigg. Utilising residuals from copper and alkali manufacture. 6d.

5,919. J. F. Chance. Producing nitrate of ammonia and bicarbonate of soda. 6d.

6,384. D. Rylands. Bottles. 8d.

6,477. H. A. Costerton. Feeding bottles. 6d.

6,517. W. Kennish. Explosive projectiles. 8d.

6,536. W. Healy and G. Hutchins. Bottles, &c. 8d.

6,867. T. Twynam. Producing alkaline phosphates from phosphoric pig-iron. 6d.

6,926. H. S. Maxim. Explosive compounds. 6d.

7,405. M. McCrainor and J. Clegg. Cleaning the inside of round bottles. 8d.

7,454. P. Brentini. Saponaceous materials. 6d.

15,129. E. Schultze. Gunpowder, &c. 6d.

15,962. J. Holmes. Stopper for bottles. 6d.

1886.

185. H. C. Register. Artificial teeth. 6d.

1,016. H. Kenyon. Distilling coal, shale, &c. 6d.

1,511. E. W. McClave. Distilling turpentine, &c. 8d.

1,860. A. T. Sherwood. Voltaic belts, &c. 8d.

1,861. G. H. Nichols and others. Sulphuric acid tower. 8d.

2,233. M. R. Pryor and A. C. Jameson. Extracting nitrate of soda, &c. 8d.

2,780. J. G. and R. M. Swan. Sheep dipping, &c., composition. 4d.

CHEMICAL SOCIETY.

A N ordinary meeting was held on Thursday, May 6, at 8 p.m., Dr. Hugo Müller, F.R.S., President, in the chair. The following papers were read:—

1. "Paranitrobenzoë-acid and some of its Derivatives." By Dr. W. H. Perkin, Jun., and Dr. E. Bellinet.

2. "An Acetic Ferment which forms Cellulose." By Adrian J. Brown.

The author described the acetic ferment; which is known as the "vinegar plant" or "mother of vinegar." Pure oxidations of it were made by a combination of the "fractional" and "dilution" methods, and also by growing it in a solid gelatine medium. The tough gelatinous membrane of the ferment is, in its general appearance, very similar to a soft animal membrane. The membranous growth of the "vinegar plant" is the only form which it assumes, no matter how the conditions are varied. *Bacterium aceti* never assumes this form; moreover, the "vinegar plant" gives all the chemical reactions of cellulose, but these are not yielded by any form of *B. aceti*; the two ferments are therefore specifically distinct. Its fermentative actions, so far as examined, are similar to those of *B. aceti*, viz. ethyl alcohol is oxidised to acetic acid, and the acid so formed is afterwards decomposed. Dextrose yields gluconic acid, and mannitol is converted into levulose. Like *B. aceti*, also, it has no fermentive action on cane-sugar or levulose. Treatment of a membrane of the "vinegar plant" by H. Müller's bromine method leaves a film of pure cellulose of the same shape and character as the original membrane. The reactions of this cellulose show it to be ordinary cellulose like that from cotton-wool. The formation and use of cellulose by a simple cell plant is of interest in connection with the important part this body plays in the more highly organised plants. Experiments were therefore made to determine from what bodies the "vinegar plant" forms its cellulose. Cane-sugar, starch, and ethyl alcohol are not converted into this body; dextrose, however, can be so converted. In this latter case, therefore, the cells of the ferment have a double action upon the sugar, viz. the production of gluconic acid and the building up of cellulose. The latter action, however, cannot be considered one of fermentation. Mannitol and levulose are converted into cellulose, and favour the growth of the ferment more strongly than dextrose.

The usual method of preparing "home-made" vinegar by means of the "vinegar plant" is to introduce a membrane into a solution of cane-sugar. The pure ferment has no action on this sugar, but the ordinary impure ferment used contains yeast-cells, and these invert and ferment the sugar, so preparing alcohol for conversion into vinegar by the acetic ferment.

The author suggested the name *Bacterium xylinum* for the "vinegar plant."

Mr. Warington, after noticing the remarkable formation of cellulose from levulose, said that it would be important to ascertain, if possible, at what stage oxidation sets in. Recent experiments by Müntz clearly show that organisms may promote oxidations which cannot be of service to the life of the organism, and which, therefore, must be regarded as unessential thereto.

The President said that it had hitherto been always supposed that cellulose was the very foundation of all vegetable cells, and it was therefore particularly interesting to have it established that certain bacteria did not contain cellulose.

Legal Report.

OLDRIDGE'S BALM OF COLUMBIA.

In the Court of Appeal on May 21, before Lords Justices Lindley and Lopes, the case of "Hey v. De La Hey" revealed a litigation which is proceeding between certain relatives and successors of the original makers of Oldridge's "Balm of Columbia" and "Elixir of Life." The case came before their Lordships in the form of an appeal from Vice-Chancellor

Bacon's decision as to the production of certain documents in the case. The plaintiff claims to have obtained his knowledge of the processes directly through the successive representatives of the original inventor, and the defendant claims through members of the family who were lawfully in possession of the secret: but the plaintiff alleges that the defendant had obtained knowledge from a manager of the business who had been under covenant not to disclose the processes. The defendant's affidavit of documents included some letters that had passed between her and her husband (who was joined as a defendant) and an old account-book of a member of the Oldridge family. The defendant claimed privilege for these documents, but the Vice-Chancellor acceded to the plaintiff's demand for the production of the documents, and against this decision the defendants appealed. Their Lordships, however, after hearing arguments dismissed the appeal with costs.

Trade Notes.

TEMPERANCE WINE MIXTURES.—Messrs. Younger & Ridley, of Brampton, are preparing a full line of concentrated mixtures for the preparation of summer and temperance beverages. The preparations which we have examined make very good cordials with little trouble, so that they should please customers who like to make their own drinks. The mixtures are put up and packed in attractive cases.

* *

MR. J. CHRISTIAN, the maker of H. Bond's "Oak Tree" marking-ink, is sending out a new retail case of the ink, fitted with one of "Scofield's" emerald pens and a small sponge. The ink is so well known that it requires no comment here. The pen is a glass one, and so constructed that the ink flows regularly from it, and it writes smoothly upon linen.

* *

PAM'S CLEANSING AND DISINFECTING POWDER.—This powder has been introduced as a grease eradicator chiefly, but the nature of it is such that it can be beneficially added to water which is used for any cleansing purpose. The powder is strongly alkaline in nature, and is a much more powerful detergent than ordinary soap powders. It is neatly put up in square packets to retail at 1*d.* and 4*d.*, and in larger quantities. The sizes we have named would sell readily if shown on chemists' counters, and as there is nothing of the oilshop character about the packets, it can be shown without vulgarising the show-cases.

* *

A CO-OPERATIVE PRODUCTIVE SOCIETY, called the London Productive Society (Limited), has been formed in London by the members of the Metropolitan Lodge of the Labour Association, for manufacturing and packing various articles in common domestic use for sale through the distributive co-operative societies. It has been decided to commence by manufacturing cocoa and chocolate.

The capital is being raised by the issue of 1*l.* transferable shares. Already upwards of 600 have been applied for, several of these having been taken by co-operative societies.

The proposals in regard to profits are, after providing for a reserve fund, to pay first 5 per cent. on capital, and the remainder as follows:—30 per cent. to the employés; 10 per cent. to a provident fund; 10 per cent. to a social and educational fund; 10 per cent. to the managing director; 6 per cent. to the committee; 4 per cent. for a special reserve fund; 20 per cent. to the society's customers *pro rata*, that is, to the co-operative societies who are their agents; and 10 per cent. to capital *pro rata*. The Society's offices are at 115 Cannon Street.

* *

WE notice the establishment at 13a Red Lion Square, Holborn, of Messrs. Creswell Brothers, a name already well known in the sponge trade. The new firm start with a varied stock including some excellent new grades of sponge obtained from the Cuban fishing grounds.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications relating to patents, designs, or trade-marks to be addressed to H. Reader Lack, Esq., Comptroller-General of Patents, Designs, and Trade-marks, Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "Trade Marks Journal," May 26, 1886.

Label, with portrait of Prince of Wales: for Prince's plate pottery. By Prince & Co. (also trading as May, Roberts & Co.), 9 Clerkenwell Road, London. 43,015.

Three-patched label: for effervescent grape-laxative and pick-me-up. By T. J. Williams (trading as Dr. De Faye), 65 King William Street, London. 43,243.

"KOMPO;" for photographic chemicals, anti-corrosives, anti-foulers, (43,772); for agricultural, horticultural, veterinary, and sanitary chemicals (43,773); for mineral and aerated waters (43,775); and for detergents, illuminating, heating, and lubricating oils, and all preparations for laundry purposes (43,776). By the firm trading as J. F. White, Benson Street, Leeds.

"ROUGH ON COLDS" and arms (griffins and shield with motto); for confectionery. By F. Allen & Sons, Canal Road, Mile End, London. 49,530.

A DIAMOND; for chemical substances used in manufactures, photography, or philosophical research (49,531); and for dyes, other than mineral (49,635). "DIAMOND DYES" within a diamond outline; for mineral and other dyes (49,636-49,638). "DIAMOND;" for same purposes as 49,634 and 49,635 (49,633 and 49,633). A CUT DIAMOND; for raw or partly prepared vegetable, animal, and mineral substances used in manufactures (49,691); and for mineral and other dyes (49,692-3). By Wells & Richardson Company, 53 Shoe Lane, London.

"OZOKERITE;" for candles, common soap, and illuminating, heating, and lubricating oils (49,713); and for pomade and perfumery soap (49,714). "UNITED SERVICE;" for common and perfumery soap (49,715-6). By J. C. & J. Field, 15 Lambeth Upper Marsh, Lambeth, London.

"JOHN KNIGHT" in shield; for perfumery. By J. Knight & Sons, Silvertown Soap Works, Silvertown, Essex. 50,183.

Monogram of firm; for soap (50,189-90). A diamond and cross; for the same (50,191-2). "QUEEN'S CONDENSED SOAP;" for the same (50,191-3). By Holston & Simpson, Calder Soap Works, Yorkshire.

"BATTLE'S VERMIN KILLER;" for vermin killer. By John R. Battle, Stonebow, Lincolnshire. 50,483.

"FLEADEATH;" for an insect powder (50,793). "KILLNERVE;" for a toothache remedy (50,793). "GALLSOAP;" for a washing hall (50,796)—each under a pair of scissors. By Thomas Child, 84 Wellington Street, Leeds.

Label; for *poudre de riz* (Picard Freres). By R. Hovenden & Sons, 31 Berners Street, W., and 91 City Road, London, E.C. 50,951.

"ELLIS'S RUTHIN WATERS;" for mineral and aerated waters. By R. Ellis & Son, Ruthin, North Wales. 51,167.

"THOMAS DICKSON" and initials on shield; for ging r beer and mineral and aerated water. By T. Dickson (trading as the Belfast Mineral Water Company), High Street, Hanley. 51,265.

[We learn that Messrs. G. F. White & Co. of Leeds, have lately formally abandoned their claim to the words "Cherry Balsam," as applied to medicinal preparations, respecting the registration of which, it may be remembered, the Chemists and Druggists' Trade Association were opposing them. The matter was virtually at an end some months since, but is actually only just completed.]



PARTNERSHIPS DISSOLVED.

KERSWILL, GEORGE & ROBERT T. THOMAS, East Lancashire, chemists and practitioners.

LAMB, J. W., and H. BEAN, Leeds, qualified barbers.

SOUTIER, A. G., & Co., Bury Street, St. Mary Axe, City, manufacturers of manufacturers, as far as regards J. Johnson.

RECEIVING ORDERS AND DATES OF PUBLIC EXAMINATION.

GLOVES, THOMAS WYNDHAM LEWIS, Pettyhill formerly of Cardiff, veterinary surgeon, formerly bookseller. June 2. Pettyhill.

METCALF, THOMAS (trading as T. Metcalf & Co.), Miles Platting, near Manchester, and Chetham, manufacturing chemist and druggist. July 2. Manchester.

OXLEY, RANSOME, Sabbiton, Staffs, dentist and practitioner of medicine and chir.

JUNE 16. Town Hall, Chelmsford.

PHEL, HENRY CLARKE, Dewsbury, chemist and druggist. July 22. Dewsbury.

STANLEY, JOHN ALBERT, Leamington, veterinary surgeon's assistant. June 2. Warwick.

WRIGHT, WILLIAM FREDERICK, King's Lynn, veterinary surgeon. June 16. Court House, King's Lynn.

FIRST MEETINGS.

GLOVES, THOMAS WYNDHAM LEWIS, Pettyhill formerly of Cardiff, veterinary surgeon. June 1. Official Receiver's Office, Mersey Tunnel.

LEWIS, DAVID ISRELS, Pembrokeshire, chemist and druggist, &c. May 22, Official Receiver's Office, Carmarthen.

MARROW, TIMOTHY, Kearsley, Lancashire, manufacturing chemist. June 1. 16 Wool Street, Bolton.

METCALF, THOMAS (trading as T. Metcalf & Co.), Miles Platting, near Manchester, and Chetham, manufacturing chemist and druggist. June 2. Official Receiver's Office, Manchester.

STANLEY, JOHN ALFRED, Leamington, veterinary surgeon's assistant. June 1. Messrs. Cooke and Sothorn's, 33 The Parade, Leamington.

ADJUDICATIONS.

FLEMING, ERNEST LARENTE, Wavertree and Millsway, Lancashire, brick manufacturer.

PHELAN, MICHAEL (trading as Phelan & Co.), Newport and Maindee, near Newport, Mon., aerated water manufacturer.

SKENE, WILLIAM, West Bromwich, surgeon and doctor of medicine.

WRIGHT, HENRY, Cinderford, Gloucestershire, corparus maker.

INTENDED DIVIDEND.

HUNT, ARTHUR, Exeter, chemist and druggist, Mr. Head of 64, on and after May 31. Mr. R. Southcott's, 1 Post Office Street, Exeter.

TOBACCO CULTIVATION IN NEW SOUTH WALES.—Tobacco grows luxuriantly. All varieties thrive, from the high-priced Cuban, which may be made into excellent cigars, to the coarse Virginian sorts, which are usually grown for the purpose of manufacturing the ordinary plug and cut tobacco. Its successful cultivation depends greatly upon the seasons, especially at the time when planting out takes place; the plants are raised in seed beds and planted out like young cabbage plants. Should the weather be very dry at this time, hand watering is absolutely necessary, or the crop is lost. At present tobacco-growing is mostly in the hands of the Chinese, whose skill and patience in the matter of small cultivations are proverbial. These men manage to raise good crops, and also to destroy the grubs which eat holes in the leaf and so sadly deteriorate the quality. There are fourteen tobacco manufactories in the colony, and a great improvement has been made in the quality of their productions.—Mr. COMBE in *Journ. Soc. Arts.*

Trade Report.

It should always be remembered that prices quoted in this section are as nearly as can be ascertained the lowest that are actually paid for bulk quantities. Considerable allowances have to be added in many cases before ordinary prices can be ascertained, and for many drugs it must be recollect that the range of quality is very wide.

MINCING LANE, May 27.

THERE is no improvement to report in trade, and in the drug-sales held this day nearly all staple-articles showed further weakness, in several instances even a sensible decline. Rumours have been current from time to time that the Billiter Street warehouses of the East and West India Dock Company had been sold for building purposes, and that the various drugs—such as musk, essences, balsams, &c.—now kept at these warehouses would be transferred to Fenchurch Street. These rumours are not quite correct, inasmuch as no sale has actually taken place, although it is a fact that the Company have for some little time been offering their Billiter Street warehouses for sale.

ACID (CITRIC) is improving rather slowly, the quotation to-day being 2s. 2 $\frac{1}{2}$ d. spot, or 2s. 3 $\frac{1}{2}$ d. for forward delivery, but all signs are in favour of a further considerable rise. The present position of the article may be summed up in a few words. The citric material is held by three or four firms of capital in Sicily, who are working for a rise, and thought to be masters of the situation, as no more concentrated juice will be made this season, it being principally derived from the lemons ripening in October and November. Lemons are now scarce and dear, and it would not pay to employ them for citric material. The present price of citric is equivalent to a quotation of, say, 27*l.* to 28*l.* per pipe for concentrated juice; but the Sieilian owners quote 33*l.* 10s. to 34*l.* At present the British makers of citric acid seem indisposed to pay the Sicilian quotations for lemon juice, but as they will have to meet the increased summer demand, and their stocks are said to be exhausted, they will in all probability have to give way, especially as the second-hand holders do not appear to command sufficient acid for the makers' requirements. Meanwhile, speculation has been rife in the article, and it is generally stated that large advance contracts will shortly fall due which cannot be met, as is frequently done, by paying the difference between selling and market prices, because the acid forming the subject of these contracts has been sold to actual consumers, who will be in need of the tangible commodity. We repeat, therefore, that all present indications favour the prospect of a rise, which may attain considerable proportions.

ACID (TARTARIC) remains unchanged at 1s. 9d. for *British*, and 1s. 8d. for *Foreign*. In sale this day, 3 easks of indifferent quality remained unsold; 1s. 7 $\frac{1}{2}$ d. per lb. was offered, 1s. 7 $\frac{1}{2}$ d. being the price.

ALOES were offered rather sparingly. The demand was slack, and *Cape* variety realised a slightly lower price, viz. 32s. 6d. to 33s. for fine hard bright. Of *Curacao* nothing was sold. One case *East Indian* sold at 75s. per cwt. A parcel of 7 kegs are held at 6*l.* 17*s.* 6*d.*

AMBERCRIS.—Two tins of very ordinary quality were shown, but found no purchasers.

ANNATTO was well represented. Ten baskets fine bright soft *Pará* roll held at 2s. 2*d.* per lb., but much less would no doubt be accepted. A few barrels bright red *Ceylon* seed brought 4*d.* per lb., an improvement upon the last sale. For good clean *Ceylon* paste 6*d.* was refused. Supplies of fine *Pará* roll are coming forward more liberally, some good parcels having just been received on the Continent.

ANTIMONY neglected at 17*l.* 10*s.* nominally.

BAEL FRUIT.—29 bags sliced, of inferior quality, were brought forward, but found no buyers. A mouldy lot is held at 4*d.* per lb.

BALSAMS.—A few cases *Peruvian* remain unsold. *To'u* neglected; one owner solicits offers at 1*s.* 1*d.*, others hold nominally at 1*s.* 3*d.* to 1*s.* 4*d.* per lb.

BARK.—*Cascarilla* without inquiry, 23 bales of old import held at 24*s.* per cwt. Of *Cinchona* a fair quantity came up for sale, but met with no attention. Flat *Calisaya*, of bright colour, but showing a good proportion of outer bark, was bought in at 1*s.* 9*d.* per lb. *False Loxa*, broken and damaged, realised 6*d.* per lb., *Condurango* neglected. *Greenheart*, which is without any inquiry, a lot of 10 barrels, which has frequently been offered, was again bought in at 12*s.* per cwt.

CAMPHOR.—Two parcels of *Japanese*, old import, together 179 tubs, were offered, but bought in at 70*s.* per cwt. nominally.

CANNABIS INDICA.—Twelve bales rather mixed dust sold at 1*l* $\frac{1}{2}$ per lb., and 5 bales of good green colour, dusty and very stalky, at 3*l* $\frac{1}{2}$ per lb. The position of the article remains unchanged.

CARDAMOMS sold at somewhat irregular prices, but cheaper on the whole. About 150 cases were catalogued, mostly of middling or ordinary quality. The greater part of the supply was sold, *Mangalore* small, to fair but country damaged, at 1*s.* 4*d.* to 2*s.*; *Ceylon-Malabar*, at 1*s.* 8*d.* to 2*s.* for small to fair long pods, smooth and pale-coloured, 1*s.* 6*d.* to 2*s.* 1*d.* for plump ditto, 1*s.* to 1*s.* 3*d.* for brown, partly very dark country-damaged pods; *Bombay* 1*s.* 3*d.* to 1*s.* 11*d.*, for fair to good brown, 1*l* $\frac{1}{2}$ to 2*l* $\frac{1}{2}$ for some common lots. Seeds realised 1*s.* 1*d.* to 1*s.* 6*d.*, according to quality. Medium-sized to bold *Alleppey*, brown and unclipped are held at 2*s.* 2*d.* per lb.

CIVET.—Two horns remained unsold; 6*s.* 6*d.* per lb. is the price asked.

COCCULUS INDICUS.—50 bags from Calicut sold at 8*s.* 6*d.* to 9*s.* per cwt.

COD LIVER OIL.—A speculative movement has recently been set on foot by a well-known firm in Bergen, who on May 21 bought up all the *Lofoden* oil on which they could lay hands in Hamburg, and which answered the ice-test. This oil has been shipped back to Bergen. Cod liver oil, owing, perhaps, to this speculation, is firm and may possibly go dearer shortly; although at the moment the prices are still extremely low. Under date of May 19 we hear from Norway that this year's produce of the fishery has been 23,000 barrels against 8,610 in 1885 and 6,850 in 1884. At Bergen the prices are the lowest ever known, but on 'Change in that town a slight rise of 5 kroners (6*s.* 9*d.*) since last week has taken place. *Naturelle* oil is quoted at 50 kroners. In London 3*s.* 6*d.* is nominally quoted for non-freezing *Norwegian* oil in wholesale quantities. The stock of *Newfoundland* oil here is very large, and nothing doing in the article; the price may be quoted at, say, 2*s.* 6*d.* per gallon, but there is nothing doing in this variety.

SCOTCH COD LIVER OIL.—Messrs. W. Graham Carr & Son send us the following report of the fishery just concluded:—This season's eel fishing both on this coast and on that of Norway is now over. Our boats, which number 29 trawlers, 85 deep-sea fishing boats, and 7 steam liners, engaged between the Forth and the Tyne, have been to sea 68 times from October 1 to May 12; the livers from the fish for the first two months produced nearly 6 pints out of every 14 livers. We compute there have been made in Scotland this season over 50,000 gallons of oil; hence prices are very low, good Scotch only realising from 2*s.* 6*d.* to 3*s.* per gallon, not even paying for livers, carriage, and labour.

COLOCYNTH.—46 packages were catalogued, the greater part being of ordinary quality. Two packages fair, but very seedy. *Turkey* apples were sold privately prior to auction, and 6 bags of ordinary shrivelled quality were knocked down at 10*d.* per lb.

CUBEBS.—Only 10 bags broken and dusty berries, freely mixed with stalks, were offered, but did not find a buyer, the price asked, 17*l.* 10*s.* per cwt., being considered excessive. The owner of this parcel has no doubt been influenced by the apparently large demand from France and America, but it is not unreasonable to assume that he will have to moderate his demands, fresh supplies of 142 bags having just arrived. It is well known that in America the article is entirely dominated by speculators.

CUTCH in tablets is rather cheaper; 200 boxes "MM," in good hard slabs wrapped in paper, selling in auction "with-

out reserve" at 27s. 9d. per cwt. We think that 28s. would be a fair price to pay for small lots.

ELATERIUM.—A box of greenish Maltese elaterium was again bought in, at 2s. 6d. per lb. nominally.

ERGOT OF RYE.—Easy; only 4 bags were offered and bought in.

GALLS—No less than 729 packages *Turkey* were offered, but encountered a very lifeless market, and were mostly bought in at prices ranging from 50s. for green and white mixed, to 60s. for fine blue. Some white galls were sold at 30s. to 49s. for badly sea-damaged to good very slightly damaged, and 15s. to 20s. for very low quality.

GAMBIER unchanged. For arrival the article continues to be freely offered.

GUMS.—A large assortment of *Ammoniacum* was brought forward, of which the greater part sold speedily, owners being content with reduced prices—viz., 45s. for good pale drop; 32s. to 31s. for yellow to darkish sorts; 20s. 6d. to 22s. 6d. for dark seedy drop to pale siftings, slightly mixed with dark; 18s. to 19s. for dark rather woolly and seedy drop; 11s. 6d. to 12s. 6d. for small palish siftings and pickings. *Arabic.*—There was a good assortment of Turkey sorts, of which a fair quantity found buyers, at 8s. 15s. to 12s. per cwt., according to quality. Of Cape, Aden, and Bombay gums nothing was sold. *Asafatidu* sold much cheaper again, although the greater part of the 250 cases catalogued was bought in: 30s. to 36s. was accepted for ordinary to fair pinkish black. *Benjamin* experienced a heavy decline, 2 parcels of Penang especially going cheap, at 7s. 15s. for good almondly brown-bordered, and 5s. 5s. to 5s. 7s. 6d. for fair, but false packed. The latter lot was offered without reserve. Of Palembang the lower grades were most in request, 40 cases low adulterated to rubbish selling at 50s. down to 25s. per cwt. *Dragonsblood* found no purchasers. Forty-five cases *Elemi* partly sold at the last decline—viz., 28s. for fair whitish, but it should be noted that this price was only conceded for a quantity. Eighteen out of 24 cases *Gamboge* were sold partly at a very cheap price, rather dark pipe, partly blocked, realising 12s. 6d. to 12s. 5s.; fair ditto, 10s. 17s. 6d. to 11s.; pickings, 9s. 5s. to 9s. 10s. Of *Guriacum* there were 9 boxes, 7 of which sold at prices ranging from 5s. to 1s. 6d. per lb. In *Myrrh* there is very little doing, but prices are unchanged.

IPECACUANHA.—The supply was not a large one, and only a few serons were sold at steady rates, viz. 3s. to 3s. 4d. for good, partly mouldy, to sound root.

ISINGLASS.—Public sales took place on Tuesday, when the greater part of the 456 packages catalogued found buyers at higher rates with the exception of some varieties of *Bombay* and *Brazil*, for which lower prices were accepted. The prices paid were, for *Brazil*, Para lump 3s. 9d. to 4s. 1d., second pile 2s. 9d. to 3s., third pile 2s. 4d. to 2s. 6d.; Tongue, good middling to ordinary small thin 3s. 1d. to 1s. 3d.; Honeycomb, good 1s. to 2s. 4d., Maranbam 11s. 2d. to 2s. 3d. *West India*, good 3s. 1d., mixed 2s. 7d. *Bombay* and *Kurrachee*, new tongue, good to middling reddish 2s. 7d. to 1s. 9d., low middling dull 1s. 5d.; old tongue, good to medium 2s. 1d. to 1s. 6d., low ditto 6d. to 9d., pieces 1s. 2d., bladder-pipe 2s. 9d., cake 1s. 4d. to 1s. 2d. *Penang*, leaf, fine stout long 3s. 9d., round, good 3s. to 3s. 4d., middling 2s. 9d. to 1s. 8d., ordinary 1s. 8d.; tongue, fine 3s. 7d. to 3s. 10d., middling 1s. 8d. to 2s. 5d., low 10s. 2d. to 1s. 1d., cake 1s. 3d. to 10d. *Stigón*, fine stout pale long leaf 4s. 3d., good yellow ditto 3s. 8d., ordinary mixed tongue 10d.

JALAP.—A rather large quantity, 95 bags in all, mostly damaged, was catalogued and sold fairly quickly at a further reduction, viz. 4s. 2d. to 5s. 1d. per lb. for damaged, part mouldy tubers. By taking a quantity of a certain importance, fair to good sound quality might be bought at 5s. 1d. to 6d. per lb.

KAMALA continues its downward course. Five cases sold at 5d. per lb., but the quality was not of the very best.

KOLA NUTS.—3s. 7d. was accepted for a box.

LEAVES.—We noticed a parcel of 5 bales, catalogued as *Buchu*, but being in reality *Empleurum serratum*, an adulteration of buchu often met with. The lot was withdrawn. Of the genuine leaves offered none were sold. Ten bales *Cea*, good strong Huancos character bought in at 1s. 4d.

We draw attention to an article on cocaine, appearing on p. 507 of this issue, describing the results of our analysis of a sample sent to us through the courtesy of Messrs. Julius Grossmann & Co., wholesale druggists, of Hamburg. Of *Jaborandi* 13 bales were shown. 7d. is asked for good green leaves, slightly country-damaged. 8d. per lb. was refused for 6 bales dark, dusty, and stalky *Patchouly* leaves.

MUSK.—Good *Tonquin* is slightly weaker, 74s. being accepted for Pile I. small to bold pods, well trimmed, thin skinned and good yielding, 63s. for fair but rather thicker skinne1 pods. Common qualities sold dearer, ordinary Pile III. at 17s. 6d., trimmings and cut skins at 10s. 2d. to 1s. 8d. per oz. Of *Yunnan* 5 very fine tins were shown, all genuine musk, for which 64s. 6d. was declined. Ordinary *Yunnan*, one-third false packed, sold at 27s. 6d. to 28s. 6d. *Grain* musk at 5s. 6d., and one lot at 6s. per oz.!

NUX VOMICA shows no improvement 10s. is still the price for fair *Bombay*; some rubbish from *Cochin* was sold at 1s. to 2s. 3d. per cwt.

OILS (ESSENTIAL).—Very little is doing in any of the oils usually offered in drug-sales, and of most of these the quotations remain unaltered. Sicilian oils are again firmer, the latest prices being 8s. for *Lemon*, 9s. 6d. for *Bergamot* and *Sweet Orange* of good quality. There is little doing in these oils, but it is considered that prices will remain firm during the summer months. *Peppermint.*—American HGH sold sensibly lower in drug-sale to-day, 19 cases being disposed of without reserve at 1s. 6d. to 17s. (mostly 16s.) per lb. *Menthel* in crystals also cheaper, and sold at 6s. without reserve.

OILS (FIXED).—For good *Castor* KB2 2s. 7d. was refused.

PETROLEUM again cheaper; *American* oil at 5s. 1d. to 5s. 2d. on the spot, 5s. 1d. month, 5s. 2d. to 5s. 7d. September-December. *Russian* oil, PW, at 6s. 1d. spot. In estimating the general position and the future outlook of the article, it should be borne in mind that ever since the commencement of the decline in value, which began in March last, the tendency has been in a downward direction for all positions. The production of crude oil since the beginning of the year has undergone a considerable increase, but the fact should not be lost sight of that even the increased production is exceeded by the deliveries, and that stocks are, thereby, undergoing a steady drain. Refined oil in America has for the past two months remained very steady, quotations ruling continuously at 7s. to 7s. 2d. cents per gallon; but the recent decline in crude has brought about a decline in refined oil to 7 cents. In Liverpool the trade are availing themselves pretty freely of the low prices quoted to cover a portion of their requirements for the coming season. The probable future course of prices still remains very uncertain, owing to the fact that the Russian refiners have up to the present practically held aloof from competition this year. It may be that they find it impossible to compete at the unprecedentedly low prices of American oil, and in that case a sharp advance may be expected as the consuming season approaches. On the other hand, it is said that tank shipments are contemplated, and that the absence of offers is accounted for by the fact that the arrangements for shipment in tanks have not yet been completed. Certainly no arrangements have been made to receive tank shipments during the coming season, and the idea of making such shipments would appear to be premature. But until this question is settled future prospects cannot be foretold with any degree of certainty. The probability of a serious competition from Russia has been much discussed recently, and advices from St. Petersburg have stated that the Russian authorities have approved a plan for connecting the petroleum fields at Baku, on the Caspian, with Batoum, on the Black Sea, a distance of 560 miles, by a pipe line which would probably cost about 2,000,000*l.* Connection is now had by a single track railway, with such high grades and poor service that it practically amounts to nothing. Now, should this pipe line be completed, it brings the Russian crude in nearly as favourable position for transportation as American crude is in at the American sea-board. The great point of the recent developments is that the Russian Government has actively taken up the subject of improving the condition of its petroleum trade, and now there is little doubt but that the undertaking will be carried out. This certainly is a bearish feature; it means, practically, that Russia intends to cater for the Ameri-

can trade in refined, and, if this is the case, it also indicates very poor prospects for higher prices for either refined or crude oil. The following figures indicate the visible supply of petroleum on May 1st: Europe (seven principal Continental ports, London and Liverpool)—Stock May 1, 451,202; afloat, 294,325; loading, 249,500. Total visible, 995,027 barrels, against a total on May 1, 1885, of 1,100,144; on May 1, 1884, of 1,807,315. Deliveries, as last year, May 1 to June 30, 345,856; leaving in stock on July 1, 649,171 barrels, towards 1,212,651 required for deliveries July to September. In London the total visible supply was on May 1, 1886, 154,892; May 1, 1885, 150,680; May 1, 1884, 267,893. In Liverpool, May 1, 1886, 60,939; May 1, 1885, 38,938; May 1, 1884, 51,923. As regards the tank shipments mentioned above, it is yet an open question whether this attempt to carry petroleum oil in bulk will succeed. Steamers fitted up with square or circular tanks have been engaged on the Caspian Sea in the trade, and also in carrying the oil from the Black Sea to Antwerp and other ports. This method of carrying, however, has not been so economical as could be wished. A special steamer for carrying the oil literally in bulk is now being built on the Tyne. The machinery is placed aft, in order to avoid proximity to the cargo, and other special arrangements for preventing the shifting of cargo, explosion, or fire, are being introduced. When casks or tanks are used there is a loss of freight on empties, and additional risk of leakage. It is argued, also, that when the oil is carried in bulk there will be less danger of the accumulation of gas or vapour in the unoccupied parts of holds.

RHUBARB is lower. There was a very large supply of 220 cases, the smaller part of which was sold by pressing it upon purchasers. The following include the prices paid:—*Shensi* fair, middling, grey fractured, round to partly rough good coloured coat 1s. 8d. to 1s. 7d. fair, yellow-coated but small to rough-coated ditto 1s. 5d. to 1s. 2d. *Canton*, fair, flat, dull wated, even grey fracture to round, but smaller, 1s. 4d. to 1s. 3d., common, mixed 9½d. to 10½d. per lb. *High dried*, flat, small, yellow-coated to ditto dull-coated 1s. 5d. to 1s., common at 6d. per lb.

ROOTS.—Of *Rhatany* nothing was sold. Large supplies of *Paya* have recently taken place in Hamburg, but the quality is ordinary and chumpy, and consequently the arrivals have only served to impart a firmer tendency to good qualities. The stock is said to be a very large one. An offer of 1s. 10d. for good, but partly dull, and thin *Senega* would probably be accepted.

SARSA-PARILLA.—No great quantity was offered, but yet the market declined considerably, especially for *Honduras* marks of fair to ordinary quality, which were about 2d. lower and sold at 1s. 2d. per lb. Grey *Jamaica* sold at 1s. 7½d. for indifferent quality, but 1s. 9d. was refused for a good lot. *Mexican* at 4½d. per lb.

SEEDS.—*Aniseed* has ruled firm, but the trade is exceedingly quiet at present. Values, however, do not abate; Russian seed 29s. to 30s., Levantine 30s. to 40s. per cwt. ex warehouse. The demand for *Caraway seed* has been a good one, and although people buy most cautiously, the result of the last fortnight's trading has been a slight gain in value for sellers; stocks are now very low, and on the early or late appearance of the new crop on our markets our future fluctuations will mainly depend. For good Dutch seed 35s. to 38s. per cwt. has been paid. *Cumin* remains steady at 26s. to 28s. per cwt. ex warehouse. *Musk* held at 1s. for East Indian, 7d. for weak-flavoured West Indian.

SENNA.—A good supply, including a fair proportion of *Alexandrian*, met a firm market, and business would no doubt have been brisker but for the high demands of owners. *Alexandrian* leaf is held at 9d. for small greenish, rather dark mixed, 8d. for dust; pods at 4d. per lb. Some *Tinevelly* leaf, good bold greenish, sold at 6½d. to 6¾d. per lb.

SHELLAC.—In auction on Tuesday there was a good supply of 890 cases, most of which was sold without reserve. The advance of 1s. to 2s. made last week has been maintained, although no further improvement can be recorded, and generally speaking the market is better supported than it was at the beginning of the month, but we maintain that there are no grounds for anticipating an improvement of any lasting nature. The lots sold in auction include First Orange DC fine pale at 66s., ASSL ditto 64s. to 65s.; Second Orange, B

in octagon and VSO fine but rather red and out of condition 50s. to 51s., I in diamond rather dark and of old import, at 47s. to 49s., GN diamond 48s., SCSR diamond and II fair 47s. to 48s., KD diamond fair 46s. to 47s., RB diamond fair 46s. to 47s., BP house and AP diamond fair 46s., RG diamond red 46s., DA&Co. triangle fair rather weak 45s., GII diamond dark and out of condition 45s.; Button, RBBLI fine bright first blood 58s. to 59s., PB house DN3 fourth 33s.

SOY.—A few casks sold at 1s. 4d. per lb.

SULPHATE OF QUININE is in full decline. 5,000 ounces of *Borhringer's* make were sold in drug sale at 2s. 4d. per oz., less 5 per cent. discount; an hour or so later offers were made on 'Change at 2s. 2½d. per oz. *Italian* sulphate, per advice of this morning, has been reduced to 2s. 6d. per oz.

TAMARINDS still declining. Sales took place at 8s. 6d. per cwt. for *Barbadoes*. A bid of 9s. was refused for fresh *Trinidad*.

TONQUIN BEANS.—Small sales of frosty Pará-character at 1s. 9d. per lb.

TURMERIC on the spot is without improvement, while prices for forward delivery are reported to be tending lower. Fair *Bengal* root realised 15s. in sale on Tuesday.

WAX (BEES') in large supply, with small transactions at 95s. for *Mauritius* part buff, part dark and drossy; 67. 7s. 6d. for *Jamaica*, orange and brown; 67. 10s. for *Australian* yellow to grey.

THE AMERICAN MARKETS.

(BY CABLE.)

NEW YORK: May 27.

SULPHATE OF QUININE.—The depression continues, and has become more accentuated. Within the last few days sales have been effected at 58c. (say, 2s. 5½d.) for domestic brands, and at 55c. (say, 2s. 4d.) for sulphate of quinine of German manufacture. For the present, speculators have lost faith in an early recovery, and have ceased to support the market. Hence the decline.

OIL OF PEPPERMINT.—Though the demand cannot be reported as brisk, it continues steady, and the article is firm at my last quotations—say, \$4 for pure bulk oil in tins, and \$4 25c. (= 19s. 3d. in London) for H. G. Hotchkiss.

MURIATE OF COCAINE, in gramme vials, selling now at 30c. = 1s. 3d.

MESSRS. F. DARTON & CO., of 45 St. John Street, West Smithfield, have just issued a new illustrated catalogue of spectacles, microscopes, clinical thermometers and instruments. This will be found very useful to those who have entered this branch of business.

THE CHEMISTS AND DRUGGISTS' TRADE ASSOCIATION obtained a conviction on Thursday at the Marylebone Police Court, against Mr. Wm. Whiteley of Westbourne Grove. The "Universal Provider" has recently added a photographic department to his extensive business, and on the 19th inst. the assistant secretary bought at his establishment 1 oz. of cyanide of potassium which was sold to him, though unknown to the seller, and no entry was made in a Poisons' Book, as required by Section 17 of the Pharmacy Act. Mr. Roche, for the defence, admitted an infringement of the Act, but hinted that the prosecution was prompted by a spirit of vindictiveness. Mr. Whiteley was unaware of the restrictions contained in the Act, and in future no infringement should occur. Mr. Cooke, in giving his decision, said he thought the case had been very properly met by the defendant, for there was no doubt that a contravention of the Act had committed. Cyanide of potassium was a most deadly poison, and when sold, even to photographers, it should be under great restrictions. In his opinion, the present restrictions were very mild. He did not think this prosecution at all vindictive, for this poison was being sold just in the same way as would be a yard of ribbon. He fined the defendant 20s., with 25s. 6d. costs. Mr. S. J. Porter prosecuted for the Association.

**Memoranda for Correspondents.**

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Cultivation of Drugs.*To The Chemist and Druggist—*

SIR,—In reply to many enterprising chemists in different parts of the United Kingdom, I wish that you would convey to them that I am quite willing to supply a few menthol plants, *free of charge*, if they will send an amount in stamps for postage and packing that they think necessary. I have large beds of *Mentha arvensis* ready for distribution, and I am sure that it will be a good thing to familiarise the people, through the chemists, with a plant that yields a medicine more used than any other in the most densely populated quarter of the globe, viz., China and India; the poorest families have it, perhaps it is because they have been highly civilised for so many centuries. As Po yoh, or menthol, is made by the native chemists, it is in a semi-liquid state in summer, and in this form it is quite as effective. Having lived in China I know how it is there used. My native servant cured me from an attack of sunstroke by rubbing it on my head. I have imported bales of the herb from the north of China, where it grows and have taken the oil out here. Chemists will find that the crystals containing the oil will be much more effective than the "dry white crystals," and re-crystallised substance that are forced on the English market.

Yours truly,

THOS. CHRISTY. (158|49.)

Malvern House, Sydenham, May 25.

The Consumptive Bacillus.*To The Chemist and Druggist—*

SIR,—In last Saturday's issue of THE CHEMIST AND DRUGGIST journal, you publish a query respecting "Bacterium Termo," and mention the fact of a correspondent having asked where same could be obtained a fortnight ago. I intended replying to your correspondent, being rather interested in the new treatment for tubercular consumption, having a very near relative under the treatment at present. Seeing in the *Daily News* some time back a letter written by Dr. Lambert of Liverpool, referring to the new discovery by Dr. Cantini of Italy, I wrote to Dr. Lambert, who sent a quantity of the "Bacterium Termo" with instructions how to use, and I can say that after now about two months' trial we have every hope of a cure. This I can say, before my relative had used it she was in a very bad way, coughing and expectorating the whole day and night, the pains in the lungs were so severe that she could not lie down at night but had to be propped up with pillows, and felt she was gradually going down the hill, but since using the bacterium there is a marked change, very little cough or sputa, no pains, she is able to lie down and get a good night's rest, and has increased a pound and a half in weight—she had gone down nearly a stone. I am led to give these particulars, which are *bonâ fide*, in the hope that it may be the means of saving life. I may add the bacterium is preserved in mutton broth, and kept at a certain temperature, and used in an inhaler or metal respirator. My relative used it first in the inhaler—one of Maw's—but latterly in the respirator. A few drops are placed on a bit of muslin and

allowed to dry, then placed in the respirator and kept on for fifteen minutes at a time.

I am, &c.

W. B. CAPPER.

A Cheerful Note.*To The Chemist and Druggist—*

SIR,—Allow me to thank you on behalf of some of your North-country subscribers for inserting in your valuable paper the sensible letters of "County Chemist" and "A Lover of the Old Trade." In the North of England, where the great bulk of chemists have what is termed "mixed businesses," it has invariably been found wisdom, when a cutting shop commences in a town, to lower prices at once, so as to compete with the new-comer. I cannot imagine anyone calculating only the loss of profit on a patent medicine. In nine cases out of ten the customer who goes to a shop for a patent, cheap or otherwise, buys at the same time other articles bearing a good profit. Is there not also such a thing as a customer getting accustomed to go or send for every article he may require to one certain shop, in the same manner as animals and birds get haunted to certain spots and localities? Would it not be a mistaken policy in a chemist, for the sake of the profit of a patent, to let his customer wander away to fresh fields and pastures new, and probably lose all his other custom? I have been told by a cutting grocer that the cheaper and at the same time most profitable manner of advertising is to sell some leading well-known proprietary articles at cost price; this draws the public to the shop, when other and more profitable articles are sold to them. The other day, in Newcastle-on-Tyne, in passing a grocer's window, I noticed in large letters "Pear's soap, 3s. 4d. per dozen;" side by side were some bars of yellow soap, at 3d. per lb., marked "very cheap": the latter bore, to my own knowledge, 50 per cent. profit, whilst the former bore none.

I think chemists have the remedy in their own hands. Why should we not buy such articles as Cadbury's cocoa, Coleman's mustard, &c., and label them at cost price in the same manner? I have adopted this plan, especially in the case of sugar and teas, and have found my drug sales increase considerably.

I am, yours truly,
ONE WHO IS DOING WELL IN THE OLD TRADE.

That Market Report.*To The Chemist and Druggist—*

SIR,—In your last issue reference was made in the Market Report to a parcel of Japanese Honey sold without reserve at the low price of 2s. 6d. per cwt., and your reporter intimates that he is about to analyse and report upon it.

As it is well known we were the buyers, and being rather jealous of any question raised respecting the quality of goods we purchase, and at same time willing to save if possible his valuable time, we beg to inform you that it was specially bought for a maker of blacking, and, if he uses this necessary domestic article, may possibly by the time this is in print be able to show to an admiring world his boots. That is all the Drug Trade will see of his pet Japanese product.

Yours truly,
SAM. LAMBERT & CO.

The Medicine-stamp Duty.*To The Chemist and Druggist—*

SIR,—I enclose a label which the authorities at Somerset House said was liable to stamp duty, and asked why it was not stamped. I sent the label to the Trade Association, who ruled it was liable. I had to pay a mitigated penalty of 2d.; they then informed me it was liable because it held the remedy to be a cure for coughs, &c., which to my mind it certainly does not. I saw in last week's issue a letter from "T. M." about a "Quinine and Iron tonic" label. Now, if that label (which in most unmistakable language holds it to be a remedy and recommends it accordingly) is not liable, I cannot for a moment see why I was fined 2d. for mine. Truly the judgment of these men is wonderful.

I remain, yours, &c.,
QUERY.

The label is thus worded:—"Balsam of honey, Lorchound,

and aniseed cough mixture, suitable alike for children and adults. Dose: children, one tea-spoonful; adults, two or three tea-spoonfuls. To be given when the cough is troublesome. 6d. and 1s. per bottle. Prepared by ——"

SIR.—Seeing in your last issue a correspondent, "T. M." had sent a "Quinine and Iron tonic" label to Somerset House for inquiry as to its liability to stamp duty, and having it returned marked "not liable," I beg to say I sent the same label up some four years ago, and received a printed form stating that the said label would render the preparation sold with it liable to duty. I enclose the label and reply for inspection.

Yours respectfully,

May 24.

W. C. M.

The label sent by "W. C. M." is identical with that sent by "T. M." last week.

Pharmaceutical Degrees.

To The Chemist and Druggist—

SIR.—I do not think Mr. Palethorpe exactly understands my suggestion. I should not advise conferring a degree upon all chemists, but I do not see why the pharmaceutical chemist should not be a Bachelor of Pharmacy, providing he has shown a deeper knowledge of English and Latin than is required by the Preliminary, and of natural sciences than is required by the Major, and have passed a written examination in the principles of pharmacy.

If the Pharmaceutical Society will not get the privilege, perhaps one of the Universities will open a faculty of pharmacy for us.

Yours, &c.,
GRADUATION.

The Trade Association.

To The Chemist and Druggist—

SIR.—In reading the report of the committee meeting of the Chemists and Druggists' Trade Association, I was surprised to find that some of the committee talked as though they were afraid the Association was going down the hill. I am certain that it will not, if we all as members stick to the old motto "Nil Desperandum." I have been more or less connected with the Association since its first commencement, and I can truly say that such a good work as it has done and is still doing will not be allowed to stop for want of a little stimulant (as the Australian physician puts it "New Monei"). I am not so wealthy or influential as some of my brethren in the old trade, but would be glad to do what little I could to help forward its usefulness. It was the greatest pleasure I had during my apprenticeship at Manningham, Bradford, to attend the Latin classes in connection with the above Association, held at the Church Institute. I remember one term that we had both a German and an English gentleman as tutors, and how when we as pupils met together from all branches of the town, it enlivened our spirits as well as informed our minds, and made us go forth with renewed energy and vigour to our work. I say, Long live the Association, and the good it has already done will assuredly live after it.

Yours truly,

Dufton, Westmoreland, May 25.

GEO. MOFFAT.

Empty Packages.

To The Chemist and Druggist—

SIR.—When I return empty packages I find that, however small a package may be—say, 7 lbs., for instance—it is invariably charged as half a hundredweight. Have the railway companies power legally to make this charge?

Respectfully yours,

PACKAGES.

[But if cheaper to send by the parcels rate, this can be adopted.]

Legal Points.

In reference to a question whether any limited company actually use the title of "Chemists and Druggists," we are informed that this is done by the Endover Stores Association, Bridgewater, who call themselves "wholesale and retail family and dispensing chemists, &c."

Cologne (18/158) asks if we consider a liniment called "Old Jacob's Oil" would be liable as an infringement of St. Jacob's Oil?" Our opinion is not a judicial one, nor can we tell whether the proprietors of St. Jacob's Oils will take action against anyone for infringement in the case suggested; but if they did, and if they obtained an injunction and an order for damage, we should have no sympathy with the defendant.

66/155. H. G.—The Use of Methylated Spirits.—The words of the Act are most distinct: If any person uses any methylated spirits or any derivative thereof *in the preparation* of any article capable of being used wholly or partially as a beverage, or internally as a medicine, he shall for such offence incur a fine of 100*l.* We would recommend H. G. to get the special consent of the Board of Inland Revenue, either direct or through the Excise Officer, before he attempts to make extracts by using methylated spirits.

Dispensing Difficulties.

To The Chemist and Druggist—

SIR.—As an offset to the disadvantages—such as want of classes and long hours—of which assistants employed in coast towns complain, it is oftentimes urged that these disadvantages are counterbalanced by the great variety of wants they are asked to supply, and the opportunities afforded for an extensive knowledge of dispensing, as visitors bring prescriptions from all parts of the country; assistants therefore have every chance of becoming cognisant with the newest drugs, patents, and methods of dispensing. As an illustration I enclose a copy of a prescription, of which I will only say it is too, too utterly a mixture; it means walking exercise round the shop in search of things new and old. I may add the prescription showed that it had been dispensed by Messrs. —— of another town, but the price charged was not marked.

WILLIAM LYLE.

This is the prescription, and it is worthy of the best quack going:—

Potass. cit.	..	..	..	..	..	5 <i>l.</i>
Ammon. mur.	..	..	..	..	..	3 <i>l.</i>
Spt. ammon. aromat.	..	..	..	..	..	3 <i>l.</i>
Spt. chloroform.	..	..	..	..	..	3 <i>l.</i>
Syr. tolutan.	..	..	..	..	..	3 <i>l.</i>
Ext. santa. yerba. Eq.	..	..	..	..	..	3 <i>vij.</i>
Tr. digitalis	..	..	..	..	..	2 <i>ss.</i>
Tr. eucalypti	..	..	..	..	..	3 <i>vij.</i>
Liq. ammon. acet.	..	..	..	..	..	3 <i>l.</i>
Inf. calumb. concen.	..	..	..	..	..	3 <i>l.</i>
Tr. aurant.	..	..	..	..	..	3 <i>l.</i>
Syr. codeiae	..	..	..	..	..	3 <i>l.</i>
Mist. saliva, ad.	..	..	..	..	..	3 <i>vij.</i>
Sig. adesst. spl. ev. ry 4 hours.						

B. II. writes: I enclose you a copy of a receipt for eye lotion, brought in to me to-day to be prepared. The proper way of making it would be worth knowing.

[There is about as much science in this prescription as in the one which Mr. Lyle sends us.]

Bole unioria in powder 2 oz., white coppereas 1 oz., ounce champ for, $\frac{1}{4}$ quarter of an ounce champ orated spirits of wine, 1 ounce brandy, and water a table spoonful, 2 tarts. I only put half the water, as I find it does not keep so long, as the water can be added if the eyes are strong enough to bear it; the champ for to be finely scraped into a wine glass of the brandy. To be poured out and stinet. Three days before it is added to the other ingredients while is to strong three or four days stir it often and the spirits of wine to be put the last thing.

159/25. Walter Rowe writes:—I dispensed the following prescription as I believe correctly:—

Liq. ferri hypophosph. co.	..	..	..	..	..	3 <i>iss.</i>
Liquor arsenicis	..	..	..	..	..	3 <i>ss.</i>
Liquor strichnie	..	..	..	..	..	3 <i>ss.</i>
Glycerin pepsinae	..	..	..	..	..	3 <i>iss.</i>
Aqua ad.	..	..	..	..	..	3 <i>vij.</i>

I used Savory & Moore's hypophosphite solution and Bullock's glycerin pepsin. My customer brought it back, along with a bottle he had dispensed in London, S.W., com-

plaining of the difference between the two mixtures as dispensed by myself and in London. I send you a sample of each, mine, as you perceive, being perfectly clear and not having a disagreeable smell; but the London one a copious white precipitate, the smell—I do not know how the patient could stomach it—worse than rotten eggs. It is not a matter of decomposition; after being dispensed mine keeps perfectly clear, the other was the same as sample sent at first.

[Mr. Rowe's mixture is the proper thing. The London, S.W., one has been compounded with an improperly prepared hypophosphite solution, and contains only a trace of iron. There should be no difficulty in preparing a proper hypophosphite solution. We published a formula in 1882, February issue, page 87.]

156/21. Assistant.—Hair Dye.—Peroxide of hydrogen produces a golden colour. We do not know a substance which will change the hair from a black to a red colour; it is in the opposite direction that experiment has been made. Perhaps bleaching thoroughly with peroxide of hydrogen and then using walnut pomade would give a result approaching what is desired.

154/32. Inquirer.—Hair Restorer.—Use the following: Acetate of lead, 4 oz., lac sulphuris (not precipitated sulphur), 5 oz., glycerine 26 oz., water 13 pints, and perfume q.s. You have too little sulphur in your formula.

155/6. J. H. Dawson.—Essence of Tonkin Bean is made from 1 part of the powdered bean to 10 parts of rectified spirit. Macerate for a week.

154/45. Menthol.—Glycerine Jelly.—Soak 1 oz. of best white gelatine in 4 oz. of water until soft, then dissolve in 20 oz. of glycerine by the heat of a water-bath, and while hot add to the liquid 2 drachms of boric acid and perfume q.s.

Curious Orders.

Mr. J. L. Chaplin (Wakefield) sends us the following originals: "Docter nickuls Canetery soap," and "a bot of Hodycolone."

Messrs. A. Royste & Sons, Middleton, also send the following originals:— $\frac{1}{2}$ lb. physigan yellow, $\frac{1}{2}$ lb. Tuner's seriet, one peneyworth of koriæn, three peneyworth of olive oil, and "Hull Lung Ray Storeatibb."

Herr Lane.—While thanking you for your friendly letter, we cannot think that the conduct of another journal is a proper subject for discussion in our pages.

15/158. Holofernes Junior.—A similar remark applies to a great part of this correspondent's letter, which we also decline with regret.

157/50. R. H. C.—Siegel's Syrup.—The following formula gives a product similar to the popular syrup:—

Dec. aloës co. conc. (1 to 4)	..	..	..	3ij.
Boracis	..	..	..	gr. xx.
Pulv. capsici subtilis	..	..	..	gr. ij.
Pulv. gentianæ..	..	..	..	gr. xxx.
Ol. sassafras	..	..	..	m.v.
Ol. gaultheriaæ	..	..	..	mij.
S.V.R.	..	..	..	5ij.
Ext. taraxaci liquid.	..	..	..	3ij.
Theriacæ, to	..	..	..	3iv.

Dissolve the oils in the spirit, rub up the powders in a mortar with the decoction, and mix the rest of the ingredients in the same way. The addition of 6 grains of euonymin is an improvement. The veritable syrup contains a powerful chologogue similar to euonymin.

151/60. A. H. C.—Moc-Main Truss.—This truss consists of a very elastic pad, to which is attached a small lever spring, adapted in strength to each individual case if necessary. The strap which goes round the body is made of soft leather, and is springless. The truss is said to possess the security of the steel spring with the ease and comfort of a mere bandage. Moc-Main means an imitation of the hand. It is also the name given to the stuffing of the pad.

Lactophosphate Syrups.

159/30. W. G. M. writes: Can you or any one of your readers kindly tell me what they would use in dispensing a prescription with

Syr. lacto phosph. calcis and soda (given as written).

One or two London wholesale drug houses could not furnish me with the preparation. It was first dispensed at Maryborough.

[There ought to be no difficulty about getting these syrups, as they are very commonly prescribed. Syrupus Calcis Lactophosphatis is in the U. S. P., and is quite easily prepared. The iron syrup is a more troublesome one to make. The syrups are generally dispensed in equal proportions.]

Syrup of Rhubarb.

159/29. Inquirer wishes to know whether any reader of this Journal can tell him the best method of proceeding in making Syrupus Rhei, B.P.

He finds that after having exhausted the rhubarb and coriander with the quantity of spirit and water ordered in the Pharmacopœia a clear liquid is obtained, which, after having been evaporated by a water-bath to the required bulk, has become quite turbid by the separation of what he considers to be a large quantity of pectin. The liquid can only then be cleared by passing and repassing for several times through a piece of filtering-paper, which by then has become so clogged that the paper will not permit of the liquid passing more than the rate of a drop every five minutes. Can any means be adopted that shall prevent the liquid altering its physical condition upon evaporation?

154/10. C. E. L.—Specific Gravity of Syrups.—Tall cylindrical jars about 2 inches in diameter are used, along with a saccharometer, properly speaking a hydrometer, saccharimeter being the name applied to the polarimeter used for determining the proportion of sugar in any solution thereof. Baume's scale is quite arbitrary, and has to be used with a table. Twaddle's is better; the degrees on it multiplied by 5 and the product added to 1,000 gives the specific gravity.

Sulphocarbolate of Zinc in the proportion of 2 to 5 grains to 1 oz. of water is used as an injection in urethral diseases.

267/13. Bent Glass Cases.—**W. H. B.** writes:—"Is there any accounting for a glass case on counter to crack with a loud report, under normal conditions as to heat, &c.? This accident happened to one of three which had not been disturbed for twelve months, and everything at the moment quiet about the shop. No vibration.

[We shall be glad to receive the experience of our readers on this matter. Similar breakages occur not infrequently, but under so different conditions that it is difficult to say what the cause may be.]

152/42. A. N.—Fluckiger's Ipecacuanha Assay.—We hope to give you full particulars next week.

154/1. A. C.—A Leaf-scale is a protective organ of the bud, and is a modified leaf, generally hard in texture.

1/158. Chemicus.—To Colour Billiard Balls.—Immerse the ball for ten to twenty minutes in a mixture of 1 part of nitric acid and 32 parts of water, and after washing transfer to a solution of stannous chloride (1 to 200), where it

is kept for an equal length of time. It is finally boiled in a solution of carmine (1 to 200), to which a little ammonia has been added. Or for the last two operations may be substituted boiling in a pint of water containing 100 grains of cochineal and 100 grains of stannous chloride in a copper pan. The addition of a pinch of tartaric acid towards the end of the boiling will give a scarlet colour.

Liquor Hydrargyri Perchloridi.—Student sends us about 3 grains of a precipitate which has been deposited in 10 ozs. of this liquor, which was made with lump ammonium chloride, as he had previously observed that this afforded a clear solution, which his small crystals did not. The solution was made with distilled water. On examining the precipitate we find it to be ammonio-chloride of mercury (*Sal Alembrothi*). It will be remembered that Mr. Martindale pointed out about fifteen years ago that *Sal Alembrothi* is really formed in this solution, and that it is very prone to precipitation. Generally, however, it is supposed that the deposit in the stock bottles is carbonate of mercury, and this is no doubt the case where a hard spring water is used. Assistants who have the opportunity should examine any deposits which they may come across.

159 40. R. W. Borthwick.—*Tinctura Ferri Pomata* is made by digesting 1 part of *Ext. Ferri Pomat.* in 8 parts of cinnamon water and 1 of rectified spirit, and filtering. To make the extract, the juice of 5 lbs. of unripe apples is taken, set aside for a day or two in a warm place, then strained, and to the strained liquor is added 1½ oz. of powdered iron. Again set aside for five days, digesting at a temperature of 50° to 70° C. Then strain, and evaporate the strained liquor to a thick extract.

157 68. Failure.—Your only plan is to dig out the Hierapiera. Keep the bottle in a warm place, with the stopper out, so as to harden the contents thoroughly.

270 41. F. T. Gibson.—There is no advantage except that cream of tartar is a milder and more efficient refrigerant than tartaric acid.

A Chance for Chemists.—A correspondent of the *British Medical Journal* (*Inquirer*) writes:—Two or three years ago a chemist and druggist sent me a preparation of his own for Whooping Cough, which, in some cases, I have found very useful. Can any of your numerous readers give me his name and address? The dose for children is ½ drachm to 2 drachms, in water.

W. J. J. We hope to be able to fulfil your wishes.

55 158. Rival Attractions.—A Welsh correspondent, writing on some other matter, adds: I cannot close this epistle without thanking you for the great change you have made in THE CHEMIST AND DRUGGIST by publishing it weekly instead of monthly. But I am afraid that there are many beside myself who have missed many a Sunday morning discourse and stayed at home instead to have a good look through our paper; but I consider it no sin.

159 50. Screw.—Please refer to past numbers. We answered part of your query no later than last week.

52 158.—A. T. W. asks:—Can you inform me of a solution to syringe plants with to destroy insects without injuring the plant? [Gishurst Compound, made by Price's Candle Co., is a favourite with most gardeners for this purpose. We have lately tried very successfully the nicotine as recommended by Mr. Christy in this journal (May 15) on some rose trees. Nicotine is of course a very deadly poison. We used five or six drops to the gallon in warm water.]

Information Wanted.

154 66. By E. O. H.—What is Byno-Pepsinæ? Is there a better and more recent formula for Beef and Iron Wine than that published previously in your valuable Journal?

23 155. A. G. R. wants to hear of the makers of Lux Liquida, a furniture polish. It was formerly made at 42 Wych Street, Strand, by Holman & Co.

A. E. P. (28 156) wants to know the address of the manufacturer (or agent) of solidified carbonic acid gas. Science has not got so far as that yet. Liquefied carbonic acid gas is made in Germany, and the makers have an agent in London.

E. J. (33 155) asks:—Why should Fellows's Syrup be allowed to be sold with the stamp so placed, as it is, on the outside wrapper, that the bottle is easily opened without tearing the stamp, such being in direct contravention to the requirements of the Stamp Act?

159 43. Roderick wishes the address of a manufacturer of Cream of Tartar.

158 40. W. H. L. wants a cheap and easy method of SILVERING IRON CHAINS. It does not matter about lasting more than a day or two.

LINIMENTUM POTASSII IODIDI CUM SAPONE.

THE B.P. 1867 method for preparing this liniment gave so variable results, and the product even when successfully turned out was so far from satisfactory, that it was generally agreed that a wise step had been made in reverting to the original formula containing curd soap, and which it was generally admitted gave an excellent preparation. Recently, however, a correspondent of the *Pharmaceutical Journal* has stated that he failed to satisfy himself and to make a good preparation. Several correspondents in reply have communicated their experience, which is in favour of the new formula. One of these, by following the *Pharmacopœia* to the letter, gets a good liniment, and two others suggest slight alterations in order to ensure a constant and satisfactory result. Mr. John T. Coats (Leith) states that if the official directions are exactly followed a froth or lather is raised "which does not fall in one hour, nor even in twenty-four hours." In fact, the whole preparation is resolved into a complete mass of lather. But by placing the soap (in fine shavings), glycerine, water, and iodide of potassium (in powder) all together in a wide-mouthed bottle, using such a size as the quantity of liniment to be made will almost fill, fit it with a tight bung, and by heating it gently in a water-bath, and repeated shaking, it all dissolves easily and quickly and at a pretty low temperature. Then shake the bottle till cold, turn the preparation into a mortar, add the oil of lemon, and stir well, but not briskly. The result is a cream-like product.

Mr. J. Glover's (Worcester) plan is to dissolve the iodide of potassium and glycerine as directed. Reduce the curd soap to thin shavings, put into a jar with the water and weigh the jar and contents. Then dissolve the soap by heat of water-bath, again weigh, and add water if necessary: strain through muslin into a good-sized jar (three or four times as large as required to hold the whole), and, with brisk stirring, add the iodide and glycerine solution; continue to beat the whole for twenty minutes or half an hour, then add the oil of lemon.

In connection with this subject it is worthy of notice that the original preparation was sent out in covered pots, and had the consistency of a jelly. Consistency greatly depends upon the soap used. Curd soap is a variable article, as all soaps are. There is a kind which is sold in 1-lb. bars, feebly scented with citronella, which gives an excellent gelatinous liniment.

DR. LINCK'S GENUINE MALT EXTRACT,

CONDENSED IN VACUO,

Prepared by M. KOCH & CO., Successors to Dr. Linck & Co., Stuttgart, Germany. (Established 1864.)
This carefully-prepared Malt Extract is well known on the Continent, and recommended by the highest medical authorities in cases of Debility and Emaciation, in Diseases of Children with Consumptive Symptoms, Chronic Cough, &c.

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Sold in Bottles—Retail Price, 2/- each; Wholesale, 19/- per dozen.

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Prepared by R. STUETZ, Chemist, Successor to Dr. MIRUS, Jena, Germany.

This carefully-prepared Meat Solution contains the real, stimulating, and nourishing constituents of the best quality of beef, freed of fat and sinew. Owing to its high degree of digestibility, it is of the greatest value to persons suffering from stomach and nervous complaints, to delicate children convalescents, etc. It is at the same time exceedingly appetising, and totally devoid of that objectionable nauseous taste so common in most of the Meat Preparations.

It is warmly and solely recommended by Professor Leube. See "Sammlung Clinischer Vorträge" of R. Volkmann, in Dr. Wiel's "Tisch für Magenkränke," and in Professor Reclam's "Gesundheit" (Zeitschrift für Hygiene), No. 14, viii., 1882, under the title "Newest Nourishments." Professor Reclam also has had great success with it in cases of debility of persons of all ages. This Preparation has been for some time, and is still, in use at the German Hospital, Dalston.

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Referring to the recent papers on the above subject, desire to call attention to their

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which are prepared from selected Cinchona without the use of mineral acids, contain the whole alkaloidal contents of the bark, are uniform in quality, and carefully standardised. Each preparation contains 48 grains alkaloids per fluid ounce—the former representing fine *Verde Califaya*, and the latter good *Succirubra*.

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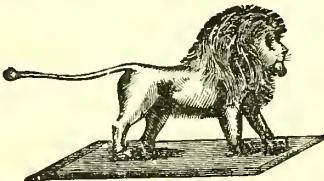
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PRICE 3s. 6d., 6s., and 9s. per doz., to a/c.

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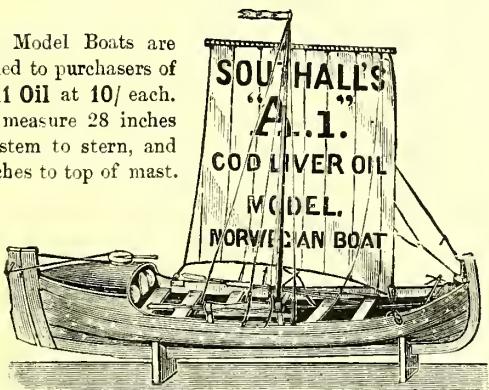
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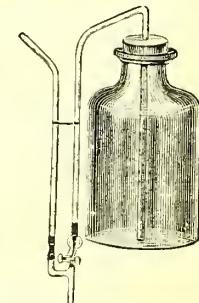
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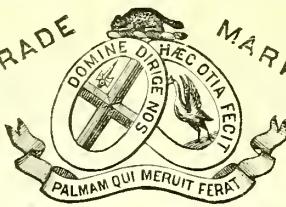
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For over 60 years in use as an excellent remedy in cases of
ACIDITY, INDIGESTION, HEARTBURN, GRAVEL, AND GOUT.

Sold by all respectable Chemists, in LARGE-SIZED Bottles (the 1s. size containing nearly
Double the quantity usually sold at that price), at **1/**, **2/6**, and **3/6** each.

CAUTION.—Observe that the Signature of the Inventor is on every label.

SIR JAMES MURRAY'S FLUID CAMPHOR

Is a valuable remedy in cases of SLEEPLESSNESS and WEAK NERVES. Bottles, **1/** and **2/** each.

**SIR JAMES MURRAY & SON, Chemical Works, Temple Street, Dublin.
BARCLAY & SONS, 95 Farringdon Street, London.**

DINNEFORD'S FLUID MAGNESIA.



*The most efficacious antacid and mild aperient for
Delicate Constitutions, Ladies, Children, and
Infants.*

**DINNEFORD & CO.,
Pharmaceutical Chemists,
180 NEW BOND STREET, LONDON;
AND ALL WHOLESALE DRUGGISTS.**

INJECTION DAY.

An Infallible Remedy and Certain Cure
IN ALL

URINARY DISCHARGES.

BOTTLES **2/6** EACH.

Depot: J. MUNDAY, Chemist, Cardiff.

London: F. NEWBERY & SONS, 1 King Edward St., E.C.

COLONIAL AGENTS WANTED.

PETRI BROS.,

39 LIME STREET, LONDON, E.C.,

CHEMICAL AGENTS AND EXPORTERS.

SPECIALITIES:

POTASHES.—Carbonate, Caustic, Muriate, Prussiate, Permanganate, Sulphate.

SODA.—Carbonate, Caustic, Bisulphite, Hyposulphite, Sulphite, Sulphide, Prussiate.

ACIDS.—Oxalic, Tannic.

*Saltpetre, Chloride Barium, Colours, Aniline Dyes,
and all Chemicals.*

METHYLENE.

*Obtained by the action of Metallic Zinc on
Chloroform and Alcohol.*

Discovered to be a general Anesthetic by Dr. RICHARDSON
in 1867.

1-lb. Bottles, 16s.; 8-oz., 8s.; 4-oz., 4s.; 2-oz., 2s. 6d.

COMPOUND ANÆSTHETIC ETHER,

For producing Local Anesthesia.

In 4-oz., 10-oz., and 20-oz. Stoppered Bottles, 2s., 4s., and 7s.

OZONIC ETHER.

In 2-oz., 4-oz., 8-oz., and 16-oz. Stoppered Bottles, 2s., 3s. 6d., 7s., and 12s.

PEROXIDE of HYDROGEN.

First introduced as a medicine by Dr. RICHARDSON.

ETHYLATE of SODIUM

(Dr. RICHARDSON's Formula), for removing Nevii, &c. In $\frac{1}{2}$ -oz. & 1-oz.

Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. & 4s.

STYPTIC COLLOID,

For promoting the Healing of Wounds by the first intention.

In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d.

and 4s. 6d.; 16-oz., 12s.

CHARCOAL CAPSULES,

Containing Pure Vegetable Ivory Charcoal.

In Boxes, 2s. 6d. each.

J. ROBBINS & CO.

OXFORD ST.
147

OXFORD ST.
147

NOTICE OF REMOVAL.

WILLIAM TOOGOOD,

WHOLESALE AND EXPORT

GLASS BOTTLE MANUFACTURER

AND

DRUGGISTS' SUNDRYMAN,

HAS REMOVED FROM

35, 36 & 37 MOUNT STREET, GROSVENOR SQUARE, W.,
TO

BURLINGTON BUILDINGS,

HEDDON STREET, REGENT STREET, LONDON, W.

TO OUR CLIENTS AND FRIENDS.

SIRS,—

On the occasion of advising you of our change of address, consequent, firstly, by the expiration of leases of premises which we have occupied for the past 56 years, and, secondly, by the necessity of obtaining greater accommodation to meet an increasing trade, we take the opportunity of thanking our friends for the support which has been accorded to us in the past, and to hope that we shall meet, not only with the same, but an increased support in our new premises.

Having greater facilities, our stock will be gradually extended to meet all requirements of the Trade, and our system of administration will be such as to secure the prompt execution of all orders entrusted to our care.

Our Show Room will contain a full line of samples of our manufactures, and we solicit a visit of inspection from all our friends—town, country, colonial, and foreign.

Yours truly,

WILLIAM TOOGOOD.

AUSTRALIAN AGENCY AND SAMPLE ROOM:

Mr. A. I. JOSEPH, Bond Street, Sydney.

Telegraphic Address: "TOOGOOD LONDON."

Telephone No. 3834.

William Toogood's Price Current of Glass Bottles, Measures, Earthenware, Druggists' Sundries, &c., will be forwarded post free upon application.

SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.

DRUGGISTS' SUNDRIES

IMPORTANT NOTICE.

May 29th, 1886.

The undersigned have much pleasure in calling the attention of the Trade and Shippers to the New Edition of their ILLUSTRATED DRUGGISTS' SUNDRIES LIST, which has been carefully revised to date and numerous additions made, and attention is drawn to advertisements of specialities in November issue of "The Chemist and Druggist."

This List will be found most complete, and so arranged as to be easily referred to. It will be forwarded free to any Registered Chemist and Druggist on receipt of Business Card.

N.B.—The word SAVARS has been adopted and duly registered by the Proprietors as a Trade Mark on every description of Druggists' Sundries supplied by them to the Registered Chemists and Druggists only.

Sole Proprietors—

EVANS, SONS & CO., LIVERPOOL.

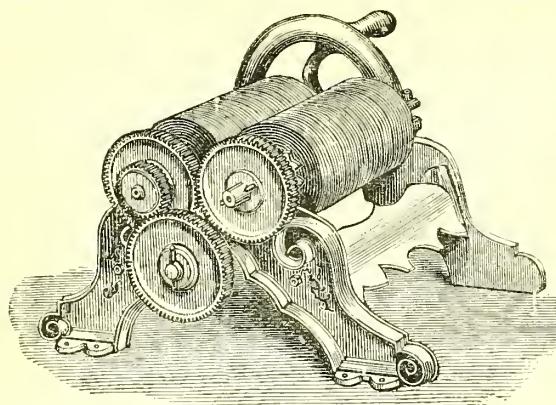
LONDON:

EVANS, LESCHER & WEBB.

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EVANS, SONS & MASON (LIMITED),
Montreal and Toronto.





T. S. COCKING'S DOUBLE-ACTION PILL MACHINE.

Complete in itself, and requiring no Piping Press.

Reduced Price, £8 net.

A week's trial allowed, carriage being paid. Write for Circular

**T. S. COCKING, Chemist
SITTINGBOURNE, KENT.**

AGENTS — ANY SUNDRY HOUSE.

Small Pipers, 50/-; Burnisher, 6/-.

FOR
DISPENSING, DRUGS,
OILS,
MINERAL WATERS,
PERFUMERY,
PATENT MEDICINES,
&c., &c.

GLASS BOTTLES

MANUFACTURED BY

KILNER BROS.

FOR
FEEDING,
In GREEN &
WHITE GLASS,
and all
Kinds of Fittings.
Best Quality.

NO. 3 GREAT NORTHERN GOODS STATION, KING'S CROSS, LONDON.

HOME and FOREIGN BUYERS are invited to Correspond with us, as we have a very LARGE SELECTION to choose from
Send for our Illustrated Price Current—a Revised Edition just out.

GREAT REDUCTION IN PRICE OF GLASS BOTTLES, SYPHONS, ETC.

ESTABLISHED TWENTY-FIVE YEARS.

ROUND SHOULDER OR LIME JUICE BOTTLES.

$\frac{1}{2}$, $\frac{3}{4}$, $\frac{2}{3}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{6}{7}$, $\frac{8}{9}$, $\frac{10}{11}$, $\frac{12}{13}$, $\frac{16}{17}$, $\frac{20}{21}$ oz.

$\frac{1}{2}$, $\frac{3}{4}$, $\frac{2}{3}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{6}{7}$, $\frac{8}{9}$, $\frac{10}{11}$, $\frac{12}{13}$, $\frac{16}{17}$, $\frac{20}{21}$ per gross.

VIALS (Long, Medium, or Short Series).

$\frac{1}{2}$, $\frac{3}{4}$, $\frac{2}{3}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{6}{7}$, $\frac{8}{9}$, $\frac{10}{11}$, $\frac{12}{13}$, $\frac{16}{17}$, $\frac{20}{21}$ oz.

Good quality $\frac{1}{2}$, $\frac{3}{4}$, $\frac{2}{3}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{6}{7}$, $\frac{8}{9}$, $\frac{10}{11}$, $\frac{12}{13}$, $\frac{16}{17}$, $\frac{20}{21}$ gross.

KALI (CONFECTIONER'S) BOTTLES.

$\frac{4}{5}$, $\frac{6}{7}$, $\frac{8}{9}$, $\frac{10}{11}$, $\frac{12}{13}$, $\frac{16}{17}$, $\frac{20}{21}$ oz.

$\frac{1}{2}$, $\frac{3}{4}$, $\frac{2}{3}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{6}{7}$, $\frac{8}{9}$, $\frac{10}{11}$, $\frac{12}{13}$, $\frac{16}{17}$, $\frac{20}{21}$ gross.

GLASS SYRINGES (Best quality).

$\frac{1}{2}$, $\frac{3}{4}$, $\frac{2}{3}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{6}{7}$, $\frac{8}{9}$, $\frac{10}{11}$, $\frac{12}{13}$, $\frac{16}{17}$, $\frac{20}{21}$ oz.

All and every kind of Bottle made, and prices given

for any particular pattern.

SPECIAL PRICES ON APPLICATION.]

Best White Glass, China Tops, White Indiarubber Fittings, 27/ gross; Black ditto, 34/ gross.

Curved, with Screw Caps, White Indiarubber Fittings, 36/ gross; Black Indiarubber Fittings, 42/ gross.

N.B.—The fittings for above Screw Feeders are made in Glass (no Metal or Earthenware).

SYPHONS: Block Tin Mounts, best in the trade, 19/- doz. f.o.b. Antwerp. SELTZGENES: 5 pint, 14/- each

J. & J. LANG, Glass Works, Alsace and Lorraine.

37 Quai Flamand, ANTWERP; and 28 Rue Notre Dame de Nazareth, PARIS.

SHOWROOMS AT 82 HATTON GARDEN, LONDON, E.C.

THE
NORTH LONDON GLASS BOTTLE CO.
(I. ISAACS & CO., Proprietors),
OUR NEW SPÉCIALITÉ BOTTLES

THE HANDSOMEST DISPENSING BOTTLES MADE.

We supply them, 6-oz, and 8-oz, 10/- per gross; 3-oz, and 4-oz, 9/- per gross. Those requiring a first-rate Bottle should see them before ordering of any other house. We also continue to supply our Second Quality Bottles, with name in scroll if required, 6-oz, and 8-oz, 8/- per gross; 3-oz, and 4-oz, 7/- per gross. These are first-rate value for the money. White Phials at greatly reduced prices, which may be had on application; also a sample bottle of any kind sent free.

Bankers—London & Westminster Bank. Established 50 Years.

Warehouse: 25 Francis St., Tottenham Court Road, London, W.C.

OKELL'S ORIGINAL MONA BOUQUET

[Retail, 1/-, 1/9, and 3/6; Wholesale, 7/-, 12/-, and 22/6 per doz.

This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for WHOLESALE Agencies to be made to the Sole Consignee, THOMAS WEST, Chemist, 61 Chester Road, Stretford, Lancashire.

See Index, pages xi to xiii.

TO CHEMISTS ABROAD.

Before making up your indents peruse carefully the ILLUSTRATED EXPORT PRICES CURRENT, issued by us, of OVER 200 PAGES, containing Prices of Drugs, Chemicals, Pharmaceutical Preparations, &c., as also of Druggists' Sundries and Surgical Instruments, now largely added to. Issued in ENGLISH, January and July; SPANISH, April and October.

Special attention is called to SAVARS Specialities; see advertisements, pages xix, xxxii, and xxxv.

LONDON:

EVANS, LESCHER & WEBB.

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EVANS, SONS & MASON (Limited), Montreal and Toronto.

FOREIGN SPECIALITIES AND MEDICINES.

REVISED PRICE LIST.

ROBERTS & CO.,

FOREIGN AND ENGLISH CHEMISTS, WHOLESALE, IMPORT, AND EXPORT AGENTS FOR FOREIGN MEDICINES AND PATENTS,

76 NEW BOND STREET, LONDON.

Messrs. Roberts & Co. beg to inform the Trade that they are Agents for all the principal French and Foreign Specialities and Medicines, a large supply of which they have always on hand, and can supply on very favourable terms. They are in daily communication with their Paris House, and can offer exceptional facilities for procuring New Medicines, &c., &c., with very little delay.

The following is a list of a few that they name *au hazard*, and that have a large sale:—

Retail	Per doz.	Retail	Per doz.	Retail	Per doz.	Retail	Per doz.
4/6.. Alcool de Menthe Ricqles	41.5	1/6.. Capsules Matico	36/-	2/3.. Guyot's Gondron	18/-	7/0.. Rabuteau's Elixir Ferrug.	65/-
2/3.. Ditto ditto	21.8	4/6.. " Italien	6/-	11/.. Laville's Gout Tincture	31.10	2/9.. " Sirop	24/4
2/3.. Aubergier's Syrup	26.3	4/6.. Mathe Caylus	27/-	11/.. " Pills	91.10	4/0.. Racahout	31/-
2/3.. Paté	15.4	4/6.. Chassaigne's Wine	38.8	2/3.. Papier Fayard	13.6	4/6.. Reynal's Bougies	37/10
6/.. Bay Rum	57/-	2/9.. " Pills	24.4	1/1.. Ditto	7.3	2/9.. Ricord's Injection	24/4
5/.. Ditto	31/-	4/6.. Clin's Bromide Cam. Dragées	4/-	.. Papier Fruneau	24.4	4/6.. " Capsules	36/-
2/.. Belloc's Charcoal	15.4	5/- .. Eau Béton (Genuine)	40.1	2/3.. Ditto	1/4.5	9/- .. " Syrup	90/-; 4/6; 42/-
1/.. Lozenges	14.5	2/.. Ditto	24.4	1/9.. Paté Aubergier	15.4	1/6.. Star Paper	11/-
4/.. Blanardi's Pills	32.5	2/6.. Espic's Cigarettes	13.6	1/9.. " de Berthé	15.4	2/9.. Vallet's Pills	22/6
2/.. Ditto	18/-	6/- .. Elixir de Coca	56.9	2/9.. " de Coca	24.4	1/9.. " Ditto	14/5
6/- Brou's Injection	27/-	2/9.. Flon's Syrup	22.6	1/9.. " de Georgé	14.5	4/6.. Veloutine (White, Pnk, Yel.)	37/10
6/- Bugeaud's Wine	36/-	2/- .. Gayetty's Paper	15.4	1/1.. " Ditto	9/-	3/6.. " ditto	27/-
4/- Bully's Vinegar	32.5	2/3.. Granules Arsen. Acid	13.6	1/6.. " de Nafé	13.6	2/9.. Vichot's Trochilques	21/8
2/- Ditto	16.3	2/9.. " Iron	14/5	1/9.. " Regnault	14.5	4/6.. Valentine's Meat Juice	88/-
4/6.. Candé's (Lait Antéphilic.)	39.8	2/9.. " Soda	15/4	7/- .. Pierlot's Valerian	59.5	4/6.. Vin de Coca Mariani	39/8
4/6.. Capsules Bromide Camph.	45/-	2/9.. Grimanit's Syrup Lime	23.5	2/9.. Babuteau's Dréées Ferrug	24/4		

Special Quotations in large quantities.

MM. Roberts & Cie. ont l'honneur d'informer MM. les Pharmaciens Spécialistes de France et de l'Etranger qu'ils se mettent à leur disposition pour des dépôts qu'ils voudraient établir à Londres. On peut avoir tous renseignements en s'adressant à leur maison de Londres ou à Paris.

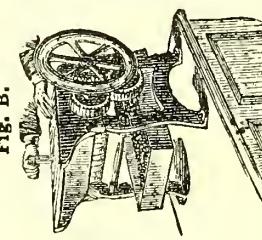
SPECIAL AGENTS FOR MARIANI'S ELIXIR, EXTRACT PATE, PILLS, SYRUP AND WINE OF COCA, AND FOR VALENTINE'S MEAT JUICE AND LE GRAND'S ORIZA PERFUMERY.

Established] House in Paris. ROBERTS & CO., Rue de la Paix 5. [1823.

J. W. PINDAR'S NEW ROTARY PILL MACHINES,

As now used by Messrs. Holloway, Cockle, Cox, and all the principal Pill Makers in England, Australia, America, and France.

FIG. A.—This invention consists in a novel and improved arrangement of Machinery, whereby any description of Pill Mass can be converted into Pills, at the rate of from 15 lbs. to 40 lbs. per hour, according to the size of the Machine used.



ROTARY PILL
MACHINES.

Fig. A.—No. 1...£12 12s.

" 2...£15 15s.

" 3...£20 0s.

Press suitable for same,
£2 16s.

Machine, capable of making
10 lbs. of Pills per hour,
particularly adapted for
persons making small
quantities, at £7 16s.



J. W. PINDAR'S
IMPROVED

NEW PATENT "ECCENTRIC" PILL COATER,

Invented and made by

J. W. PINDAR, Patentee.

By an entirely new arrangement of machinery this machine is constructed in a manner which supersedes all others, as owing to its "Eccentric" motion, the Pills—which may be coated with Pearl, Silver, Gold, or Sugar, &c. &c.—are thoroughly separated from each other during the process, and retain their original spherical form, whilst being thrown round the receptacle with remarkable velocity.

These machines are equally adapted for coating large or small quantities; thus, a machine constructed for and suitable for coating 20 lbs. will coat 1 lb. only with equal efficacy, and in the most satisfactory manner.

Each machine is supplied with a Drug Sifter, to be attached if required, and which, fitting to top of Pill Receptacle, is subject to the same "Eccentric" motion as above mentioned.

No. 1.—For 2 lbs.... £2 16s. 0s. Sifter for same ... £0 7 6
No. 2.—For 5 lbs.... 3 16 0 " " 0 16 0
No. 3.—For 10 lbs.... 5 16 0 " " 1 5 0
No. 4.—For 20 lbs. on Iron Standard. £15 15s.—Sifter for same, £2 5s.

The smallest machines can be worked by Steam Power at a small additional cost.

FIG. B.—A small useful

Machine, capable of making
10 lbs. of Pills per hour,
particularly adapted for
persons making small
quantities, at £7 16s.

Press suitable for same,
£2 16s.

Any of the above can be made to cut two or three different size Pills,
at an additional cost for extra Rollers and Plates.

PIPING PRESS.

PIPING PRESS, Fig. C.

Fig. C. is the improved Press for Piping, by means of which a great quantity of Mass can be Pip'd in a few minutes truer than by the old method of rolling.

PIPING PRESSES.

Fig. C.—No. 2... £5 10s.

" 3... £8 0s.

to hold 1 Gallon, price £3 10s.

£1 10s. extra for every additional Gallon.

PIPING PRESS, Fig. C.

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Fig. C. is the improved Press for Piping, by means of which a great quantity of Mass can be Pip'd in a few minutes truer than by the old method of rolling.

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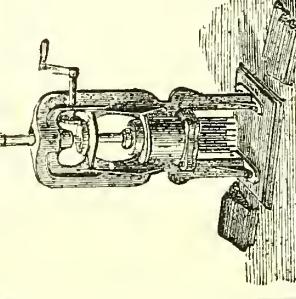
PIPING PRESSES.

Fig. C.—No. 2... £5 10s.

" 3... £8 0s.

to hold 1 Gallon, price £3 10s.

£1 10s. extra for every additional Gallon.



DOUBLE-ACTION TINCTURE PRESSES,

To Mr. J. W. PINDAR,
224 Strand, 13th March, 1866.

Sir,—I have much pleasure in stating that the Pill Machine which you made for me answers remarkably well, as the Pills are far better made than those by hand-machines, and with much less waste. I can, therefore, confidently recommend it as a very excellent one, a great saving of labour, and consequently expense.—I remain, yours faithfully,

THOMAS HOLLOWAY.

Mr. J. W. PINDAR,
338 Oxford Street, opposite Great Portland Street,
Feb. 11th, 1871.

Sir,—The Rotary Pill Machine and Press which we had from you (for a special order) answered very satisfactorily.—We are, Sir, Yours JOHN BELL & CO.

3 Crane Court, Fleet Street, Feb. 14th, 1871.

To Mr. J. W. PINDAR,
29 Murray Street, New York, and Farringdon Road, London, Nov. 9th, 1880.

Dear Sir,—Your letter of inquiry came duly to hand. As I always told you, the Pill Machine in operation at my London warehouse has given entire satisfaction. So have those we are using in this country. We can make smooth, round Pills of uniform size at a very small expense. I can safely say that your Pill Machine is all that you claim it to be—a perfect Machine.—Yours truly,

A. J. WHITE.

Testimonials from all parts of the world may be seen on application to

J. W. PINDAR,
75 New Church Road, Camberwell,
LONDON.

This addition will be found of great advantage in the Laboratory, being both efficient and compact.

LINT

THE
LIVERPOOL PATENT LINT CO.,

MARK STREET MILLS,
NETHERFIELD ROAD NORTH,



LIVERPOOL.

MANUFACTURERS OF

PATENT FLAX AND COTTON LINTS

OF SUPERIOR QUALITY.

Will tear with perfect ease both ways, are free from the slightest impurity, being made from UNSIZED yarns, and possess immense absorbent power and porosity.

Our SPÉCIALITÉ,

EXTRA SUPERFINE CAMBRIC LINT,

Is the finest Cotton Lint manufactured, and is specially adapted for Surgeons' private use.

ABSORBENT AND CARDED COTTON WOOLS.

ABSORBENT OPEN WHITE AND GREY

BANDAGES

Which are much superior to any other kind for softness, coolness, and cheapness.

WADDING, SURGEONS' TOW,

AND

STYPTIC TOW,

AN ADMIRABLE ANTISEPTIC DRESSING.

Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.



FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

Apothecaries' Hall,	London	Frazer & Green,	Glasgow	Morson, T., & Son,	London
Allen, Hanbury & Co.,	"	Gale & Co.,	London	Newberry & Sons,	London
Baiss Brothers,	Birmingham	Giles & Son,	Clifton	Oldham, G., & Co.,	Dublin
Banks & Richards,	"	Goulding, Messrs.	Cork	Parsons & Richardson,	Leicester
Barron, Harvey & Co.,	London	Gratton & Co.,	Belfast	Peake, Allen & Co.,	Dublin
Bell, John, & Co.,	"	Grimwade, Ridley,	London	Raiimes Co.,	Liverpool
Bourne & Taylor,	"	Grindley & Son,	Chester	Raiimes & Co.,	York
Corbyn & Co.,	"	Hearon, Squire & Francis,	London	Raiimes, Blanshards & Co.,	Edinburgh
Cox & Gould,	"	Hodgkinson, Tonge & Stead,	"	Sang & Barker,	"
Curling & Co.,	"	Hopkins & Williams,	"	Sanger, J., & Sons,	Aberdeen
Curtis & Co.,	"	Hovenden, R., & Sons,	"	Sim, James, & Co.,	"
Davy, M'Murdo & Co.,	"	Hunt & Co.,	Exeter	Smeeton, W.,	Leeds
Dobbin, W., & Co.,	Belfast	Hunt, A., & Co.,	"	Southall & Co.,	Birmingham
Drew, Barron & Co.,	London	Johnson, J. H. & S.,	Liverpool	Sutton, W., & Co.,	London
Drew, B., & Alexander,	"	Langton, W., & Co.,	London	Tomlinson, Hayward & Co.,	Lincoln
Dunn & Company,	"	Lynch & Co.,	"	Treacher, Hodgkinson & Co.,	"
Edwards, W.,	Exeter	Mander, Weaver,	Wolverhampton	Westrup, J. B.,	Kensington
Evans, Gaid & Co.,	London	Marsden & Sons,	London	Westwood & Hopkins,	Lincoln
Evans, Lescher & Webb,	Bristol	Maw & Son,	"	Woolley, James,	Manchester
Ferris & Co.,	"	Meggeson & Co.,	"	Wyles & Brown,	Coventry
Foulger, S., & Son,	London	Mackay, John, & Co.,	Edinburgh	Yates & Co.,	London

After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

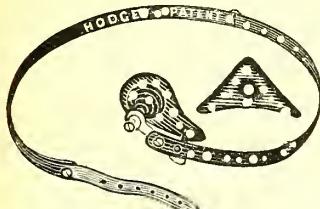
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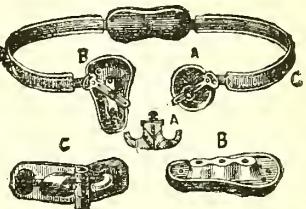
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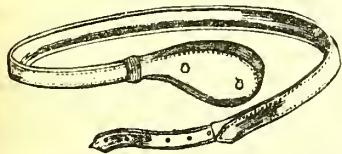
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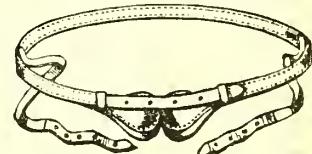
TRUSSES.

FIG. 2.

SEE INDEX, PAGES xi—xiii.

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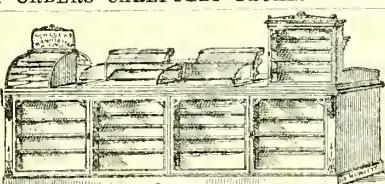
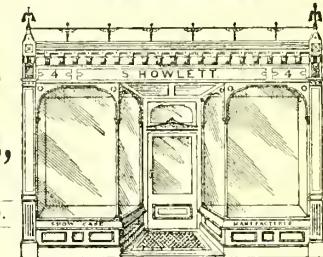
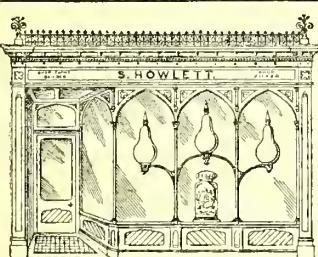
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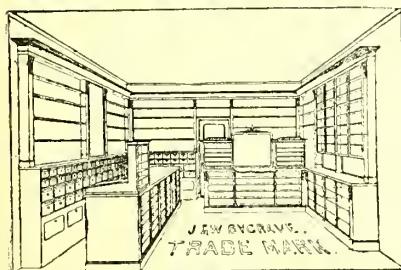
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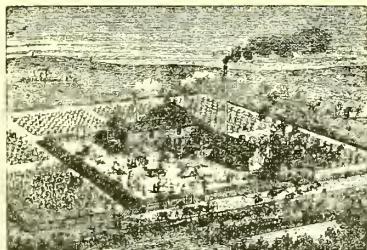
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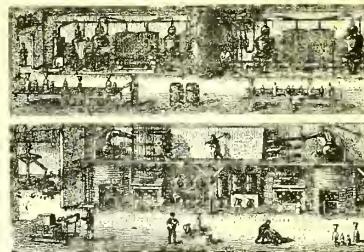
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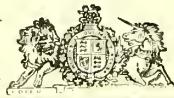
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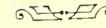
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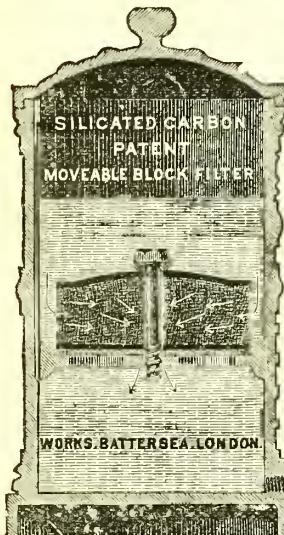
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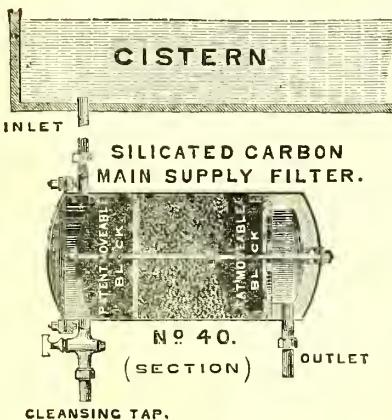
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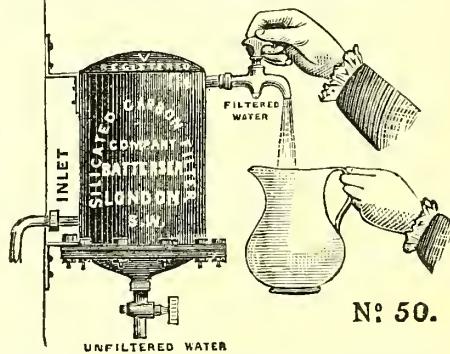
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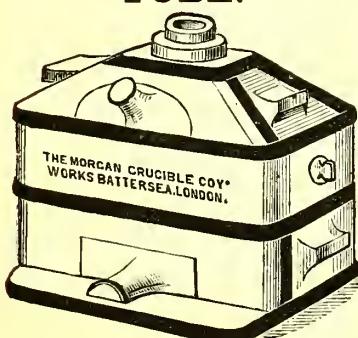
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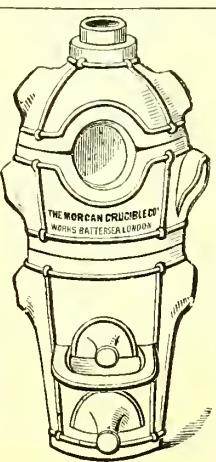
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22 ins. high with chimney (3½ ins.), 9 ins. wide out,
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The UNIVERSAL FURNACE, useful for Laboratory.
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No.	Diam. Inside.	Price.
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2 ..	5½ "	3 6
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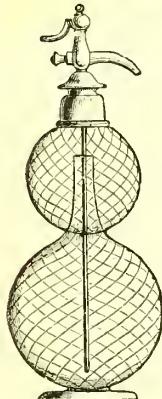
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The Marvellous Cleanser and Disinfectant.

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"THE BRITISH MEDICAL JOURNAL," Nov. 28th, 1885, p. 1,023, says:—

"The preparations of Hydroleine Disinfectants, just issued, seem to us to be of much importance, and to merit more than a passing notice. It is impossible to give a positive opinion without a prolonged trial extending over some months, but we entertain no doubt that they will soon come largely into use, and that they will in time rank as general favourites. The plan of supplying them in small boxes and tins, which can be purchased by the poor for a few pence, is certainly worthy of recognition. The Laundry Powder is especially valuable and cannot fail to be fully appreciated; whilst the Disinfecting Powders and Preparations for cleaning Brushes and Sponges are most useful. We have been much pleased with the results of our examination, and have much pleasure in recommending a trial of Hydroleine."

"THE LONDON MEDICAL RECORD," Dec. 15, 1885, p. 536; Edited by ERNEST HART, Esq., Chairman of the National Health Society.

"The new Hydroleine (Hydrated Soap Powder) is of considerable value for cleansing purposes, and is well adapted for use in the Laundry. It dissolves readily, forming a solution which lathers freely. It is useful for washing floors, tiles, marble, glass and delicate articles where the use of soap would hardly be admissible. For horses, dogs, sheep, and other animals, it is an excellent application, keeping them clean without trouble. An analogous preparation is the Hydroleine Carbolised Soap Powder, which is sold at a very moderate price, and is a powerful disinfectant. There are other Powders, intended for cleansing and reviving carpets, and for washing sponges and brushes. We have tried them all, and have no hesitation in saying that they are most efficacious. These Hydroleine Compounds are thoroughly reliable, and will come speedily into general use."

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A novel preparation for Cleansing Carpets, &c., and reviving the colours. In Tins, 6d. each.

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Free from Smell.

Perfectly

Harmless to

Animal Life.

No Soda

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Powder

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Excellent

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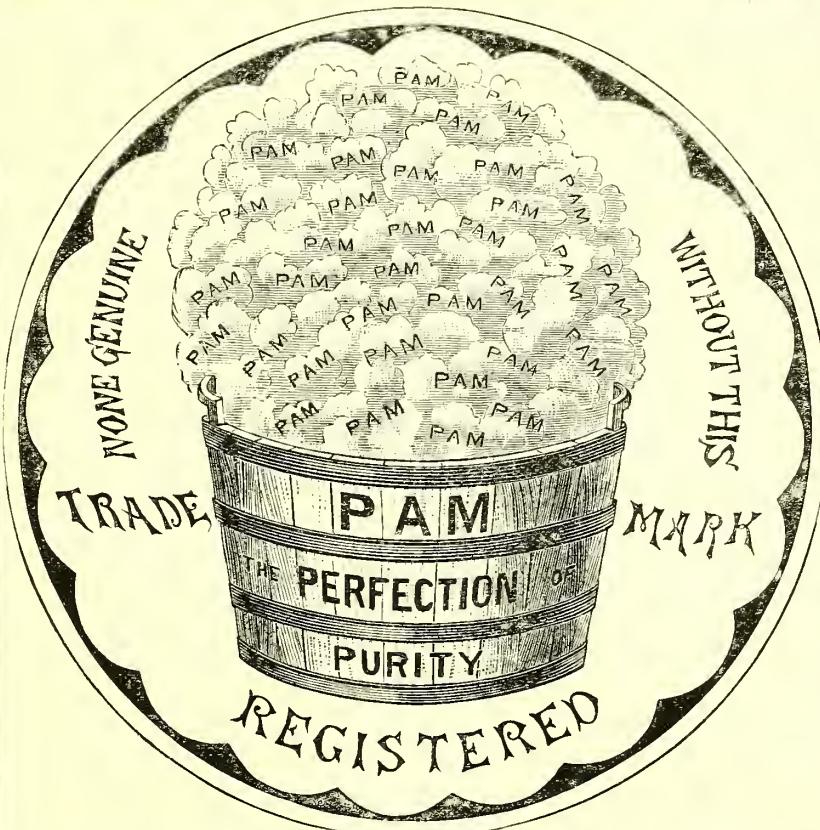
Powder.

Does not Rot

Textile Fabrics,

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This new Cleansing and Disinfecting Powder is found to be invaluable for all Domestic purposes, namely, Bathing, Cleansing and Purifying Linen, Blankets, Flannels, Carpets ; also for Cleansing Floors, Ships' Decks, Railway and other Carriages, Windows, Paint, Glass, Crockery, Milk Cans, Cooking Utensils, and Cisterns ; it prevents corrosion in Kettles, Boilers, Pipes, Chamber Utensils, &c.

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PAM'S POWDER is an enemy to Grease and Dirt : is perfectly soluble in hot or cold water ; has no smell ; does not Rot Linen, or Rust Steel or Metal Goods of any description ; will clean Silver and Plated Goods without Whiting or Plate Powder.

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As a Disinfectant, it is Far Superior to and Cheaper than either Chloride of Lime or Carbolic Acid, while it is free from the unpleasant smell and other objectionable properties of those substances.

(Signed) W. B. KEMSHEAD, Ph.D.

Examiner in Chemistry to the College of Preceptors.

Late Professor of Chemistry, Dulwich College.

Dulwich, July 24th, 1885.

Vide Health, edited by Dr. ANDREW WILSON, F.R.S.E.

PAM'S CLEANSING AND DISINFECTING POWDER.—This is likely to prove a highly useful powder for general use under all circumstances in which a cleansing, detergent, and disinfecting material is required. It is free from all smell, is non-poisonous, and yet possesses qualities which render it valuable as an aid to cleanliness, and to the repression of noxious odours. As the result of testing its powers, we believe that this powder is equal to any article of domestic commerce, and thus its advantages can be employed in cleansing articles of delicate make. A solution of this powder poured down drains and closets acts effectively in destroying foul smells and in deodorising decaying materials. Its use may therefore be thoroughly recommended for household purposes. We may add that for the effective cleansing of the woodwork of rooms, &c., after being occupied with cases of infectious disease, "PAM'S POWDER" should be freely used. It is highly useful for such sanitary work. In the kitchen the use of this powder as an ordinary detergent is also to be advocated, and the fact that it does not rust or injuriously affect metal goods is a highly important feature, and one serving to commend it more forcibly to public and domestic favour. For cleaning engines, tricycles, &c., we strongly advise all interested in these machines to try PAM'S Powder.

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For Extreme Purposes, such as Cleansing Type, Oiled Cotton Waste, Drains, Water-Closets, Urinals, Stahles, Railway Trucks, Cattle Trucks, &c., Two OUNCES to the GALLON may be used.

This is about the maximum effect; beyond this is simply wasting the material.

In all cases Rinse well with Clean Water afterwards.

For Disinfecting Noxious Smells, Dust Bins, Decaying Animal and Vegetable Matter, &c., distribute the Powder freely. Should the weather be very dry sprinkle slightly with water.

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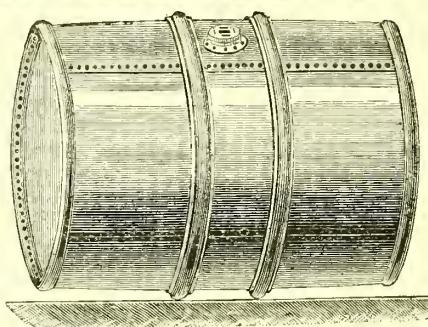
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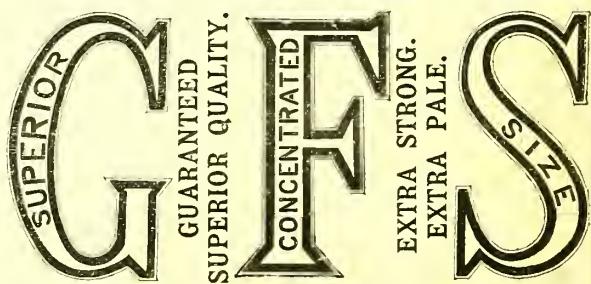
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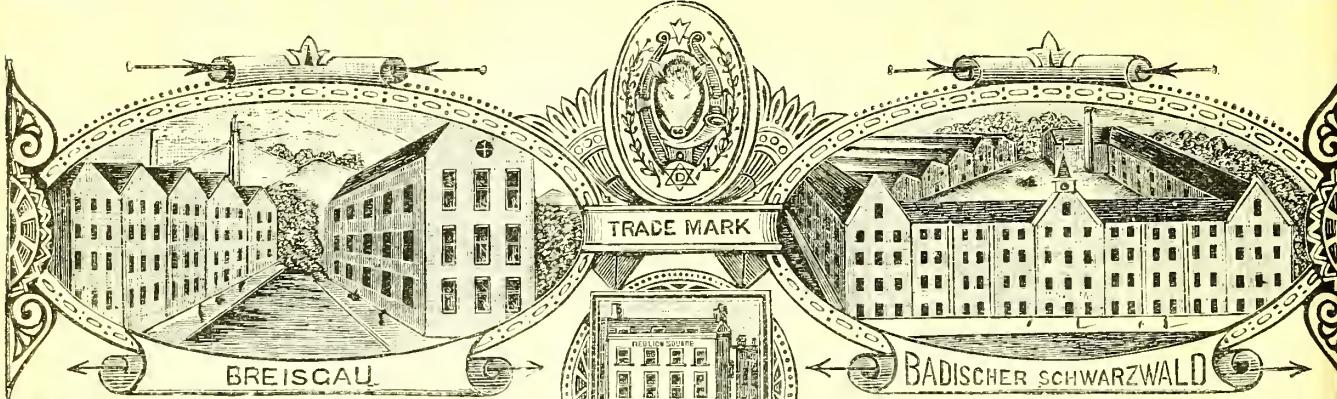
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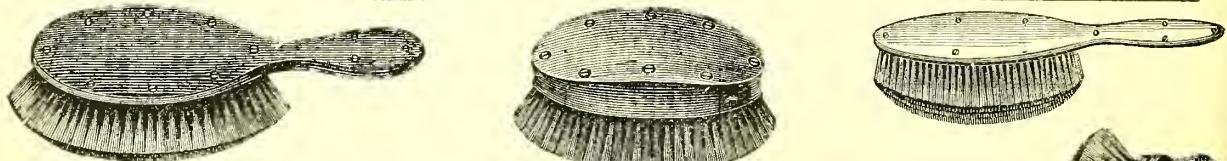
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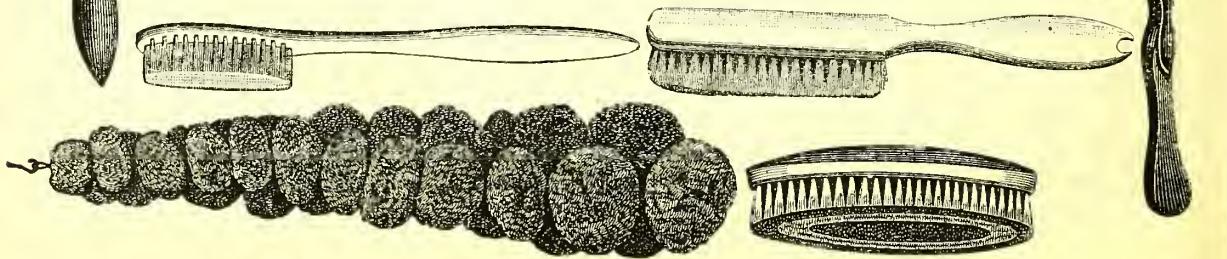


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RETAIL
1/-

FRIZZETTA
 (REGISTERED.)

Sup-
 plied by all
 London Pat.
 Medicine Houses.
 Handsome Show-
 cards, Glass Tablets, and
 Circulars profusely supplied.

Foreign and Colonial Chemists
 & should write for Terms, &c.

F. W. BATES, CHEMIST,
 BROOKS'S BAR, MANCHESTER.

AYRTON & SAUNDERS,

Designers and Manufacturers

OF

High-Class Artistic Specialities

FOR CHEMISTS AND DRUGGISTS;

WHOLESALE AND EXPORT DEALERS IN

PATENT LINT, PLAISTERS, AND COTTON WOOL,

MEDICAL GLASS BOTTLES,

SURGICAL INSTRUMENTS, TRUSSES, &c.

HARD AND SOFT WOOD TURNERS;

MANUFACTURERS OF ROUND, SQUARE, AND OVAL BOXES,

IN PAPER, WILLOW, AND CHIP; ;

[IMPORTERS OF]

AMERICAN, GERMAN, & FRENCH BOXES;

AND GENERAL DEALERS IN

DRUGGISTS' SUNDRIES of every description.

SPECIAL QUOTATIONS TO LARGE BUYERS FOR CASH.

WAREHOUSES—

149 & 153 DUKE ST.



FACTORY—

62 PARR STREET,

LIVERPOOL.

All Letters, Orders, &c., to be addressed to the Firm, 149 DUKE STREET.



AYRTON & SAUNDERS will be glad to undertake Foreign Agencies and Commissions, and to buy and ship for Firms who have no representatives in England, and as they keep themselves thoroughly abreast of the times their friends can rely upon being well posted up in all the Novelties and Specialities that are being constantly introduced.

ROBINSON & SONS,

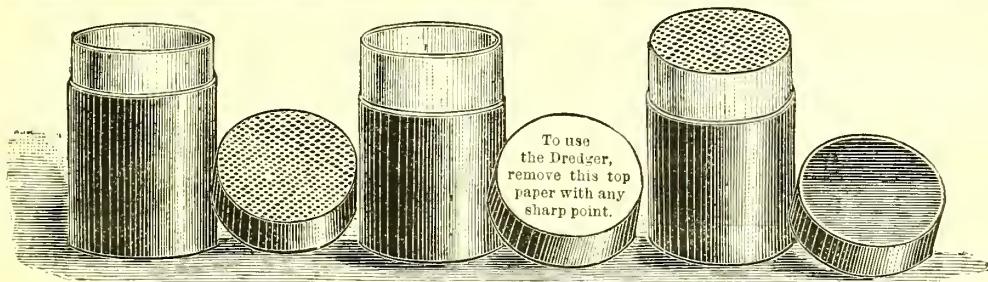
MANUFACTURERS OF CARDBOARD

PILL BOXES

ALSO

INSECT POWDER BOXES.

COVERED IN ANY STYLE TO SUIT PURCHASERS.



A

PERFORATED ZINC ON TOP OF LID.

B but covered with a printed card, which can be removed to dredge the Powder.
C " " INSIDE THE BOX, the shoulder being left loose for filling.

MANUFACTURERS OF ROUND & SQUARE CARDBOARD BOXES

USED BY

Druggists, Drysalters, Homœopathists, and Confectioners.

ESTABLISHED 1839.

Honourable Mention for Cardboard Boxes, International Exhibition, 1862.

WHEATBRIDGE MILL & HOLMBROOK WORKS, CHESTERFIELD,
AND
55 Fann Street, Aldersgate Street, London.

OSCAR SUTTON & CO., Preston, Lancashire.

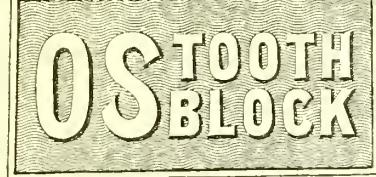
O. S. TOOTH BLOCK

"THE BEST AND SAFEST DENTIFRICE."

Be particular to observe that the Registered Trade Mark and the name "OSCAR SUTTON & CO." are stamped on all that are genuine, as worthless imitations are in the market. These Goods are selling well all over the World.

They are supplied in three styles:—No. 0. LOOSE, without boxes, to meet a growing demand for them in this form. No. 1. In Patent Metallic Boxes, to retail at 1/- each. No. 2. In elegant Crystal Caskets, to retail at 2/6 each. Nos. 0 and 1 can now be supplied with Customer's Name and Address stamped on each Tooth Block, without any extra charge, beyond the first cost of specially-prepared dies, which will serve again. No. 1 can also be supplied with Leatherette Labels affixed to the body of each metallic box, bearing customer's name, &c., or special design, in gold or silver on dark ground, affording an attractive method of advertising hours or modes of business, or any leading speciality. Write to your Wholesale house for particulars and for Show Cards and Counter Bills.

OVER 1000 TESTIMONIALS.



REGISTERED TRADE MARK.

CAUTION.

A. S. LLOYD'S EUXESIS, FOR SHAVING WITHOUT SOAP, WATER, OR BRUSH.

The GENUINE Euxesis bears the following distinctive marks:—

- 1.—The Name AIMEE LLOYD on cap of tube.
- 2.—The words "Prepared only by his Widow" in RED INK across labels.

Manufactured only by AIMEE LLOYD,

WIDOW OF A. S. LLOYD, formerly of 27 GLASSHOUSE STREET,

3 SPUR STREET, LEICESTER SQUARE, LONDON.

A. S. LLOYD'S EUXESIS,

For Shaving without Soap, Brush, or Water.

CAUTION.

The only Genuine has a yellow label printed ONLY in Black Ink, and bears the original address of the late inventor, "27 Glasshouse Street, Regent Street," the proprietors having purchased, under an administration suit, the Secret, Trade Mark, Goodwill, and Premises.

SOLE PROPRIETORS.

**R. HOVENDEN & SONS,
LONDON.**

**WAX PAPER! WAX PAPER!
Oiled Paper! Oiled Paper!**

MANUFACTURING CONFECTIONERS,
BLACKING MAKERS,

WHOLESALE DRUGGISTS, &c., &c.,

Supplied with Waxed and Oiled Papers, cut to any size and printed to any design, at the lowest possible price.

THE PARCHMENT & WAX PAPER CO.

(The Original Makers),

*Debnams Road, South Bermondsey Station,
LONDON.*

THE ORIGINAL
ARNICATED
WHITE FELT
CORN AND BUNION PLASTERS,

INVENTED AND ESTABLISHED BY
HENRY YOUNG,
A.D. 1846,

AND FAVOURABLY KNOWN ALL OVER THE GLOBE.
SUPPLIED BY ALL WHOLESALE HOUSES.

N.B.—Please see that YOUNG'S Goods are supplied, as there are many worthless imitations.

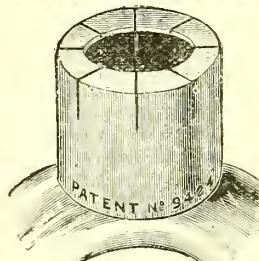
Manufactory, 72 Clerkenwell Road, London, E.C.
(LATE OF CARthusIAN STREET.)

BREIDENBACH'S PATENT LOCK STOPPER.

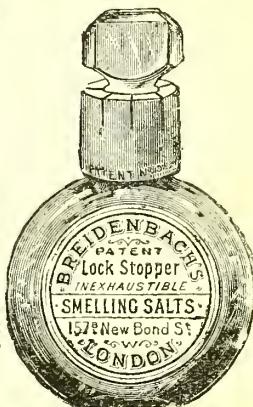
INEXHAUSTIBLE SMELLING SALTS.



BRITISH
P A T E N T
No. 9424,
1885.



PATENTS
APPLIED FOR
IN ALL
COUNTRIES.



By this means the stopper is never released from the bottle except when required; it is then simply withdrawn in the ordinary manner and replaced without the slightest difficulty. The object of this invention is to retain the PUNGENCY and STRENGTH of the salts for a much longer period than in the ordinary bottle.

BREIDENBACH & CO.,

WHOLESALE AND EXPORT MANUFACTURING PERFUMERS,

157^B New Bond St., LONDON, W.; United States Depot: 17 & 19 Broadway, New York.

New Illustrated Shipping Catalogue Mailed Free.

ESTABLISHED 1795

Telegraph Address—"MACASSARINE LONDON."

WHITE AND SOUND TEETH.

JEWSBURY & BROWN'S ORIENTAL TOOTH PASTE



This old-established and increasingly favorite Dentifrice has been over Sixty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate. The original and only genuine is manufactured solely by

JEWSBURY & BROWN, Chemists, MANCHESTER,

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered. Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address cards and directions for enclosure.

PHOENIX

ESTABLISHED A.D. 1815
GENUINE INDELIBLE

MARKING INK

**THE LEADING &
STANDARD ARTICLE**
PREPARED ONLY BY THE WIDOW OF THE LATE
JOHN MURPHY
CHEMIST AT THE ORIGINAL ESTABLISHMENT
11, NILE STREET, EAST ROAD, HOXTON, N.

NO OTHER ADDRESS. — BEWARE OF WORTHLESS IMITATIONS.

EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

JOHANN MARIA FARINA,

Opposite the Julichs Place, COLOGNE.

ESTABLISHED A.D. 1709.

PRIZE MEDALS:—LONDON, 1851 AND 1862; OPORTO, 1865; PARIS, 1867; VIENNA, 1873.

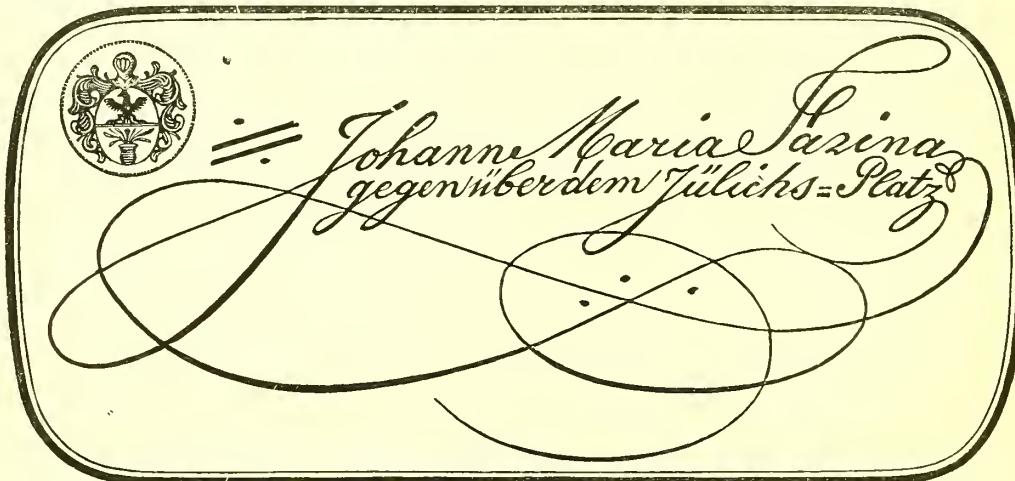
By appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain & Ireland; Their Royal Highnesses the Prince and Princess of Wales; William, King of Prussia;



Albert II., King of Saxony; Alexander II., Emperor of Russia; Francis Joseph, Emperor of Austria; Lewis, King of Portugal; H.R.H. Frederick William, Crown Prince of Prussia.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark, for the protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 12s. 6d. per dozen, against my bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. 7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:—

MESSRS. J. & R. McCACKEN,
No. 38 Queen Street, Cannon Street, London, E.C.

The following are the sizes of my bottles:—

No. 1. Long Green Flasks	—	—	—	—	—	—	12 bottles	} to one dozen.
" 2. Short White Bottles	—	—	—	—	—	—	12 "	
" 3. Double ditto	—	—	—	—	—	—	6 "	
" 4. Wickered Bottles (small)	—	—	—	—	—	—	8 "	
" 5. ditto (medium)	—	—	—	—	—	—	4 "	
" 6. ditto (large)	—	—	—	—	—	—	2 "	

JOHANN MARIA FARINA,

OPPOSITE THE JÜLICH'S PLACE.

VEGETABLE BUTTER COLOURING

(OF OUR OWN MANUFACTURE),

FOR imparting to the Butter at all seasons of the year that rich cowslip tint which is such a desideratum to all producers. It is rapidly superseding the Danish and all other makes, being more efficient and cheaper; it does not crust on the bottles, as the case with the foreign preparations; is free from Aniline, and does not colour the Buttermilk.

To Purchasers of Bulk it affords a considerable source of profit, and is well worth the attention of Druggists in the agricultural districts.

Price 1/- per lb.; 1/- in 2 gal. Bottles.

Special Terms to large consumers.

To meet the views of many of our friends, we have commenced to put this article up in bottles also, under the title and trade-mark of the "Silver Churn." It is very attractively got up, and will command a ready sale; the bottles contain more than either Danish or American, while the price to the retailer is lower than that of any other Butter Colouring in the Market.

Price in Bottles { 6d., 1/-, 2/- Size
4/- 8/-, 16/- Per doz. } Less 10 per cent. Discount.

A handsome Show Card, printed in colours, and suitable Counter Bills may be had on application.

Copy of Testimonial just received (May 18, 1886), from one of the largest Dairy interests in the country:—

"We have subjected your Silver Churn Butter Colouring to a protracted and severe trial, and it appears to us to be the very best article obtainable; the absence of any objectionable taste and smell, the beautiful straw colour imparted to the butter, as well as the very small quantity required, combining to render it both efficient and economical. We have found a teaspoonful sufficient for 24 quarts of cream at this season of the year.

"By continuing the manufacture of a quality equal to that you have supplied to us, you cannot fail to secure the good opinion and patronage of all users."

PROPRIETORS AND MANUFACTURERS—

OLDFIELD, PATTINSON & CO.,

WHOLESALE DRUGGISTS,

17 TODD STREET, MANCHESTER.

May be ordered through any Wholesale House, or of our

London Agent—B. SUART, 24 Queen Victoria St. (who holds Stock of all sizes).

Liverpool Agents—AYRTON & SAUNDERS, Duke Street.

Crawshaw's Crystal DYES.

Specially Manufactured for Domestic Use.

Crawshaw's Crystal DYES.

The Original and the Best.—Sell Readily wherever introduced.

Crawshaw's Crystal DYES.

For Domestic Dyeing, Ink Making, Wood Staining, &c., &c.

Crawshaw's Crystal DYES.

All Colours.—Perfectly Safe.—Give every Satisfaction.

Crawshaw's Crystal DYES.

In Packets, 1d., 2d., 3d., and 6d. each.—All Sizes for all Classes of Customers.

Crawshaw's Crystal DYES.

ONE PENNY PACKET is equal to a SIXPENNY BOTTLE of the ordinary Liquid Dyes.

Crawshaw's Crystal DYES

Still "Hold the Field."—No Competition has been able to approach them for Purity of Shade, Great Solubility, High Concentration, and Fastness of Colour.

Crawshaw's Crystal DYES

Can be obtained from the Wholesale Houses in all English-speaking Countries in any part of the World.

PRICE LISTS ON APPLICATION TO THE MANUFACTURERS—

E. CRAWSHAW & CO., 80 FANN ST., ALDERSGATE ST., LONDON, E.C.

